Returns--
Towards a photographic criticism.

[Or, the case of the Berliner Bild-Bericht and the North American grain elevators]

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Abstract

While the idea of a canon made up of buildings and/or architects is widely accepted, studied, and revisited within architecture, this thesis identifies the phenomenon of a 'photographic canon' of images of buildings, constructed and characterised by their repeated dissemination in publications, lectures and exhibitions. Using two exemplary sets of canonical photographs – the Berliner Bild-Bericht prints of Mies van der Rohe's and Lilly Reich's German Pavilion in Barcelona (1929), and the photo-reproductions of North and South American grain elevators from the late nineteenth century used by Walter Gropius in 1911 and 1913 – this thesis is composed around four key questions: 1. What are the processes, material practices, and relations of power through which this photographic canon is constructed? 2. What alternative photographs and differencing processes can be identified, and how do they draw attention to the normalisation and repetition of the canonical photographs? 3. What is the agency of photography when revisiting these two cases years later? 4. Which research methods and practices reveal, draw attention to, question and disrupt the normalisation of continued repetition of the photographic canons?

Though returning to the canon, this study uncovers and makes use of alternative and overlooked photographic material, and it develops the possibility of 'photographic criticism' as a method of interpretation. To do so, the thesis considers the photographic image as an object of different guises – as a lantern slide (Chapter Three), as a 35mm slide (Chapter Four), as a retouched photograph (Chapter Six), as a photographic wallpaper (Chapter Seven), and as a photographic snapshot (Chapter Eight) – to explore the multiple but specific, unique and singular contexts to which these are mobilised – as 'drawings', as projected images, as large-scale exhibitions and as archival images – and the different possibilities these materialisations provide for architectural criticism and interpretation. The thesis establishes new and alternative insights by paying attention to intricate encounters with the material, and by inserting the

researcher's own subjectivity into performative re-interpretations of the various photographic events in which they surfaced. To make these alternatives visible requires new forms of criticism that may be applicable to the interpretation of the photographic canon in art and architecture beyond the two examples explored here.

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6.15 Above, Berliner Bild-Bericht with 'visible' retouching only. Below, Berliner Bild-Bericht with 'visible' and 'invisible' signs of retouching. These two are snapshots of images 9 and 10, taken with an iPhone and a low-quality resolution as determined by the archivist. Berlinische Galerie, Photographs by author, 2013

6.16 Series of photographic zooms that try to grasp through snapshots the haptic qualities of the photographic print as encountered in the Berlinische Galerie in Berlin. Photographs by author, 2013

6.17 Karl Blosfeldt, *Urformen der Kunst: Photographische Pflazenbilder* ['Originary Forms of Art: Photographic Images of Plants'] (Berlin, Ernst Wasmuth, 1928), p. 53. Source: British Library. Photographs by author, 2014

6.18 'Woman turning around in surprise and running away', plate 73 from Muybridge's *Human Figure in Motion*. From Kingston Museum and Heritage Service, http://www.eadweardmuybridge.co.uk

7. Photographs of photographs: the photomural

7.1 Charles Eames, 'Mies van der Rohe', *Arts and Design* (December 1947). RIBA Library, photography by author, 2015

7.2 Installation shots from Mies van der Rohe solo exhibition at MoMA, 16 September 1947–25 January 1948. Source: The Museum of Modern Art Archives. url: https://www.moma.org/calendar/exhibitions/2734?locale=en#installation-images

7.3 Installation shots from Mies van der Rohe solo exhibition at MoMA, 16 September 1947–25 January 1948. Source: The Museum of Modern Art Archives. url: https://www.moma.org/calendar/exhibitions/2734?locale=en#installation-images

7.4 Charles Eames, 'Mies van der Rohe', *Arts and Design* (December 1947). RIBA Library. Photograph by author, 2015

7.5 Mies' exhibition house at the *Die Wohnung Zeit. Source:* Digital image Mies van der Rohe/Gift of the Arch./MoMA/Scala (www.scalarchives.com)

7.6 Charles Eames, 'Mies van der Rohe', *Arts and Design* (December 1947). RIBA Library. Photograph by author, 2015

7.7 Charles Eames, 'Mies van der Rohe', *Arts and Design* (December 1947). RIBA Library. Photograph by author, 2015

7.8 Bismarck Monument Project from 1910, Office building in Stuttgart from 1928. Source: Digital image Mies van der Rohe/Gift of the Arch/MoMA/Scala (www.scalarchives.com)

7.9 Internationale photographische Ausstellung (International Photography Exhibition), Berlin, 1865. Woodcut by J.Jamrath, in *Photographische Correspondenz* (Vienna, 1965), vol. 1. Source: Olivier Lugon, 'Photography and Scale: Projection, Exhibition, Collection', *Art History*, 38.2 (2015), p. 390

7.10 El Lissitzky with Sergei Senkin and others, 'Photofrieze' Soviet pavilion, *Die Pressa* (Cologne, 1928). Source: El Lissitzky letters and photographs, special collections, Getty Research Institute. Source: Olivier Lugon, 'Photography and Scale: Projection, Exhibition, Collection', *Art History*, 38.2 (2015), p. 393

7.11 Exhibition of the Fascist Revolution, Palazzo delle Esposizioni, Rome, 1932-2. Source: http://grupaok.tumblr.com/post/66100800068/exhibition-of-the-fascist-revolution-mostra-della

7.12 Wilhelm Niemman photomural, in the electricity Pavilion by Mies van der Rohe and Lilly Reich, Barcelona, 1929. Source: Berlinische Galerie, Archival ref. no. BG.FS.33/32.16. Photograph by author, 2013

7.13 Entrance hall of the exhibition *Die Kamera*, 1933. Photomurals by Wilhelm Niemann as published in *Die Form: Zeitschrift für gestaltende Arbeit*, 8.1933. Source: http://digi.ub.uni-heidelberg.de/diglit/form1933/0332/image

7.14 1932 photomurals by Margaret Bourke-White for the NBC studios at Rockefeller Plaza. Source: https://www.nytimes.com/2014/06/26/nyregion/at-30-rock-recreatig-a-rotunda-with-a-nod-to-the-past.html

7.15 Exhibition shot of *Murals by American Painters and Photographers*, May 1932. Source: http://spelunker.moma.org/

7.16 Road to Victory, 1942, installation shots. Source: The Museum of Modern Art Archives. Url: https://www.moma.org/calendar/exhibitions/

7.17 Power in the Pacific: Battle Photographs of our Navy in Action on the Sea and the Sky. Source: http://spelunker.moma.org/exhibitions/3687/#img3

7.18 Herbert Bayer, *Fundamentals of Exhibition design*. Source: https://digitalcollections.nypl.org/items/90f27111-9714-4fc1-e040-e00a18064ba4

7.19 Walter Peterhans. *How to Enlarge* (London: Sands, Hunter & Co., 1937), cover and p. 4. Source: British Library. Photography by author, March 2018

7.20 Modell für ein Hoch haus am Bhf Fridrichstrasse 1922. Archiv Nr. 6-F-8529, Inv Nr. I7677F / Archiv Nr. 6-F-008528, Inv Nr: I7676F / Archiv Nr. 6-F-008531 Inv Nr. I7679F. Source: Bauhaus Archiv, Dessau. Photograph by author, 2013

7.21 Photocollages of Resor House, 1939. Source: https://www.moma.org/

7.22 Right: Ludwig Mies van der Rohe Museum for a Small City Project, Interior perspective 1941-43. Source: https://www.moma.org/. Left: Detail of Eames and Matter's photograph. Charles Eames 'Mies van der Rohe' in: *Arts and Design,* December 1947. RIBA Library. Photograph by author, 2015

7.23 Diario Oficial de la Exposición Internacional de Barcelona, 1929. Número 12. Barcelona, 2 June 1929. Source: Josep Quetglas Archive. Photograph by author, 2015

8. Empty site photographs

8.1 *Mies van der Rohe, The Barcelona Pavilion, 50th Anniversary*. Exhibition catalogue, pp. 1-6. Source: CCA Archive. Archival ref. 8152-C.1-Exh Washington. Photography by author, 2017

8.2 (a-m) Ludwig Glaeser, photographic snapshots of the German Pavilion's empty site as encountered in 1979. Uncatalogued. Ludwig Glaeser archive, Museum of Modern Art, NY. Photographs by author, 2013

8.3 Above: Jeff Wall, *Morning Cleaning*, Mies van der Rohe Foundation, Barcelona 1999. Source: www.tate.org. Below: Andrés Jaque, *PHANTOM: Mies as a Rendered Society*, intervention in the Barcelona Pavilion 2012. Source: www.miesbcn.com

8.4 Postcards of various national pavilions at the 1929 Barcelona International Exhibition. Above: Yugoslavia. Centre: Belgium. Bottom: Italy. Source: Arxiu Fotogràfic de Barcelona. Ricardo Daza personal archive. Photography by author, 2015

8.5 Site of the 1929 International Exhibition in Barcelona under construction, 1928. Photographer: Josep Gaspar Serra. Pavilion site on the right, Ref. no. C_109_953 and aerial view of Montjuic, 01/01/1925. Pavilion site in the centre. Ref. no. C_118_260, Arxiu Municipal de Barcelona. http://ajuntament.barcelona.cat/arxiumunicipal/arxiufotografic/es/home

8.6 (a) Ref. no. MMA13.20. (b) Ref. 042 MMA13.314 (c) Ref. 043 MMA13.316 (d) Ref.040 MMA13.315 (e) Ref.039 MMA13.313 (f) Ref.038 MMA13.319 (g) Ref. MMA 13.323 (h) Ref. 035 MMA 13.310 (14.4.29) (i) Ref. 033 MMA 13.309 (29, III, 29). (j) Ref. MMA13.312. Source: Mies van der Rohe Archive, MoMA, NY. Photographs by author, 2013

8.7 Ref No. 032 MMA 13.308, Mies van der Rohe Archive, MoMA, NY. Photograph by author, 2013

8.8 (a) Spread from Erich Mendelsohn, *Russland, Europa, Amerika: ein architektonischer Querschnitt* (Basel and Boston: Birkhäuser, 1989). Photography by author, 2018. (b) Brasilia under construction. Photographer: Marcel Gautherot. Source: Instituto Moreira Salles. https://ims.com.br/titular-colecao/marcel-gautherot/

8.9 Tugendhat house under construction. Photography © Haus Tugendhat, documented by Dieter Reifarth. Source: www.thecharnelhouse.org

8.10 Farnsworth House. Source: Myron Goldsmith Fonds Canadian Centre for Architecture, Montreal

8.11 New National Gallery © Archiv Neue Nationalgalerie. Source: Nationalgalerie, Staatliche Museen zu Berlin. Photograph by author, 2013

8.12 Lake Shore Drive, as photographed by Hedrich Blessing. Source: Chicago History Museum. https://photostore.chicagohistory.org/hedrich-blessing

8.13 Albert Kahn and Associates, Architects, 1941. Source: Albert Kahn Papers, Bentley Historical Library, University of Michigan. In Eva Franch I Gilabert, Amanda Reeser Lawrence, Ana Milijački and Ashkey Schafer (eds), *OfficeUS Agenda* (Baden: Lars Müller Publishers, 2014). p. 124

8.14 *Eisenbeton, Zeitschrift für Eisenbeton, Beton, Cementwaren and Kunstein Industrie.* Berlin, 23 August 1909. Nr 1. pp. 206–09. Photography by author, 2013

8.15 Frank and Lillian Gilbreth, 'Instruction Card for Operation', Herman Auckman Company, 1912. Source: Gilbreth Library of

Management, Purdue University. Frank Gilbreth's progress photos. Lowell Lab, MIT, 1902. Source: *Bricklaying System* (1909), pp. 22–25 From Eva Franch I Gilabert, Amanda Reeser Lawrence, Ana Milijački and Ashkey Schafer (eds), *OfficeUS Agenda* (Baden: Lars Müller Publishers, 2014), p. 110. Photograph by author, 2018

8.16 Walter Gropius, 'Micro-Motion studies of crane lowering beam and of opening "boswik" grill', Dessau, Germany, 1926. Source: *Bauhaus Builds Dessau* (1930), pp. 103, 175. Walter Gropius progress photos. RFG 'Experimental Settlement' Dessau, Germany, 1928. Source: 'Report on the experimental settlement in Dessau', *RFG*, 2.2 (April 1929), pp. 110–13. From Eva Franch I Gilabert, Amanda Reeser Lawrence, Ana Milijački and Ashkey Schafer (eds), *OfficeUS Agenda* (Baden: Lars Müller Publishers, 2014), p. 111. Photograph by author, 2018

8.17 Series of photographs of *Dawn*, facing *Morning*, by Georg Kolbe in Ceciliengarten, Berlin. Photographs by author, 2014

8.18 Postcard of a series of images collected as souvenirs of the process of reconstruction of the Pavilion in 1986. Section of 1929 column. Ref no. (8501/14) Bauhaus Archiv Berlin. Photograph by author, 2013

8.19 Postcard of a series of images collected as souvenirs of the process of reconstruction of the Pavilion in 1986. Remains of the 1929 Pavilion's foundations. Ref no. (8501/13) Bauhaus Archiv Berlin. Photograph by author, 2013.

8.20 Double spread from Josep Quetglas, 'Fear of Glass: The Barcelona Pavilion', in *Architectureproduction*, revisions 2 (New York: Princeton Architectural Press, 1988), p. 129. Photograph by author, 2018

8.21 Sophie Ristelhuber 'Because of Dust Breeding' (2007). Source: http://galeriepoggi.com/en/artistes/oeuvres/3361/sophie-ristelhueber

8.22 Above: Carlo Fratacci, active Naples ca.1860. *Basilica*, 1864. Unnumbered plate from an album entitled *Principales Vues de Pompeii par Charles Fratacci* (Naples, 1864), comprising 26 photographs by Fratacci. Ref No. PH1983:0504:007. CCA. Below: Victor Burgin, *Basilica I*. 2006. One of 24 black-and-white photographs in superposed horizontal rows of twelve. Ref No. PH2006_0207. Victor Burgin, *Basilica II*, 2006. One of seventeen black-and-white photographs in superposed horizontal rows of nine and eight. Ref No. PH2006_0215. Canadian Centre for Architecture. Photographs by author, 2014

9. Re-stagings

9.1 (a) Barcelona Pavilion from the *L.M.V.D.R.*, Ludwig Mies van der Rohe Series.
Source: www.josephklevenefineartltd.com
(b) Thomas Florschuetz, *Enclosure III: View of the reconstructed Barcelona Pavilion, Spain*. Archival reference no. PH2002:0003, Centre for Canadian Architecture, Montreal. Photograph by author, 2014
(c) Shelagh Keeley, *Barcelona Pavilion VII*, 1986/2012. Source: www.circuitgallery.com

9.2 Robin Evans slide sheet. Source: Architectural Association Photo-Library Photography by author, 2017

9.3 Double projection of Barcelona Pavilion by Robin Evans. 'Lights on, projector off, first slide please', performance at Centre for Canadian Architecture/Montreal, 14 October 2017. Source: Photography by author, 2017

9.4 Slides with annotations that give an account of the Pavilion's horizontal lines and symmetry. Source: Architectural Association Photo-Library. Photography by author, 2017

9.5 Examples of purchased and mounted slides. Source: Architectural Association Photo-Library. Photography by author, 2017

9.6 Slides from Robin Evans's slide collection, one (a) depicting a horizon line, and (b) bringing to the fore the question of the eye-level (reflection of Evans can be seen). Source: Architectural Association Photo-Library. Photography by author, 2017

9.7 Performance, Newcastle 2013. Photography by author, 2013

9.8 Lecture/performance, Architectural Association 2017. Photography by Valerie Bennet, 2017

9.10 Performance, CCA, 2017. Source: photographs by Robert del Tredici, 2017

10. Returning

10.1 Photographs of returns by Banham, Evans and myself. For Banham and Evans, source: Architectural Association Photo-Library. Photography by author, 2015. Photographs by author in Buffalo, 2013, and Barcelona, 2009.

10.2 Selection of images explores in this thesis. Assembly by author, 2018



Figure 1.1. Repetition of the canonical photographs of the grain elevators in North and South America



Figure 1.2. Repetition of the canonical photographs of the German Pavilion in Barcelona.

1

Photographic canon in architecture

> 'Many of us, maybe all of us, look at some images repeatedly, but it seems that we do not write about that repetition, or think it, once written, worth reading by others.'[1]

Anyone familiar with architectural culture will know the North American silos made famous by Walter Gropius, Le Corbusier, Reyner Banham and others, as well as the 1929 German Pavilion by Mies van der Rohe and Lilly Reich recently revisited by Claire Zimmerman and George Dodds.[2] Both have been repeatedly published, and both feature regularly in lectures, exhibitions and other media. It is perhaps surprising, therefore, that we know and recognise the buildings as

[1] T.J. Clark, *The Sight of Death: An experiment in Art Writing* (New Haven, CT, and London: Yale University Press, 2006), p. 9.
[2] George Dodds. *Building Desire: On the Barcelona Pavilion.* Oxford: Routledge, 2005. Claire Zimmerman. *Photographic Architecture in the Twentieth Century.* Minneapolis: University of Minnesota Press, 2014. Claire Zimmerman,. 'Modernism, Media, Abstraction: Mies Van Der Rohe's Photographic Architecture in Barcelona and Brno (1927--1931)', PhD thesis, City University of New York (2005).

canonical because of just two set of photographs: in the case of the German Pavilion, sixteen Berliner Bild-Bericht photographs; and in the case of the silos, a set of photographs first selected by Gropius to illustrate his article in the 1913 *Werkbund Yearbook*. These two sets of images have shaped our knowledge of these canonical buildings.

Before migrating into other contexts, the Berliner Bild-Bericht prints and Gropius's selection of images of grain elevators surfaced for the first time in architectural discourse in early twentieth-century Germany as black-and-white photo-reproductions in architectural books and journals. Although the photographs of the silos had been disseminated via various media before publication (as will be explored in Chapter Three), it was through their repeated publication in the printed press as photo-reproductions that these two photographic canons settled and have subsequently been perpetuated. Through their early twentieth-century photo-reproductions, we still, unsurprisingly, encounter the Pavilion and the elevators as mandatory reference points in modern architecture.

I can still recall one of the lectures I attended as an undergraduate student constructed as a sequence of projections of the sixteen Berliner Bild-Bericht prints and the uneasiness produced by the repeated encounter with these two sets of photographic canons thereafter (see Figures 1.1 and 1.2). This stability and durability of photographic images through their repeated reproduction was a phenomenon already identified in the 1930s. For Carl Einstein, repetition 'served a lie that humanity told itself about the Real; repetition generated the "illusion of the immorality of things," and endowed them with a semblance of stability and durability'. 'Images', Einstein continued, 'proved more secure and durable than human beings.'[3] The case of the Pavilion and the elevators show that the images' stability is still a palpable consequence of the repetition of the photographs of

[3] Carl Einstein, 'Notes sur le cubism [1929]', in *Werke Band 3: 1929–1940*, ed. Hermann Haarmann and Klaus Siebenhaar (Berlin: Fannei & Walz, 1996); English translation by Charles W. Haxthausen titled 'Notes on Cubism', *October*, 107 (2004), p. 165.

the Pavilion and the elevators within architectural culture: their repetition in printed media has normalised the use of these photographic canons, perhaps uncritically.

This thesis identifies the two sets of photographs as 'photographic canons' that operate silently, sedimenting their histories, altering the ways in which we understand these buildings, naturalising and establishing them as a narrow set of visual architectural representations, and, more surprisingly, supporting very different interpretations of the buildings.

By addressing the repeated photo-reproductions of the German Pavilion and of the North American grain elevators as 'photographic canons', this thesis aims to explore the 'photographic canon' as a phenomenon that, though recognised within art historical discourses, remains to be further studied and acknowledged as an architectural phenomenon in itself. Using the German Pavilion's Berliner Bild-Bericht prints and the photo-reproductions of North American grain elevators as examples, this project asks: What are the processes, material practices, and relations of power through which the canon is constructed? What are the pre-histories and contexts of these images? What are the architectural and art historical ideas that gave rise to them? How are they reproduced in other contexts alongside texts by curators, critics and architects? What alternative photographs could be identified and how can they draw attention to the normalisation of the canonical photographs? How is it possible to interrupt the endless repetition of these powerful canons? Conscious that addressing the canon is also a means of recalling it, this thesis proposes a series of methodologies in which to address the canon does not necessarily mean to reinstate its hegemony; rather, the methodological purpose is to destabilise the canon, and to work with it while proposing a different reading.

1.1 The canon

The definition of the term canon as a 'rule' or 'standard' already evokes modes of regulation and normativisation according to which works can be measured. In the words of Hélène Lipstadt, which draw upon Michael Payne's definition of 'Canon' in the *Dictionary of Cultural and Critical Theory*:

> Canons, strictly speaking, are formed of and by texts. 'Canon,' from the Greek *Kanon*, meaning cane, came to use in the 3rd century to designate holy writings that were the source of unimpeachably orthodox teaching, texts soon understood to constitute the Bible, a body of limited unalterable, authoritative writings. The use of 'canon' to designate classical works of literature, and by extension, classical works in all the arts, is relatively recent and coincides with the emergence in the 18th century of the concept of aesthetic value.[4]

This definition is useful, as it already highlights the 'authoritative' nature of canons, something that will be evident in the examples addressed in this study. Another useful and comprehensive definition of canon formation is by visual theorist Griselda Pollock. In her book *Differencing the Canon* (1999), Pollock delimits the problems of exclusion that such a construct entails, while identifying mechanisms and strategies to disrupt it:

> I define the canon as a discursive formation which constitutes objects/texts it selects as the products of artistic mastery and, thereby, contributes to the legitimisation of white masculinity's exclusive identification with creativity and with Culture ... Canonicity exists in many forms ..., the Marxist term *hegemony* explains the way a particular social and political order culturally saturates a society so profoundly that its regime is lived by its populations simple as 'common sense.' Hierarchy becomes a natural order, and what appears to survive from the past because of its inherent significance determines the value of the present ... 'Tradition' is the canon's 'natural' face ... Tradition is, therefore, not merely what the past leaves us. It must always be understood as a *selective* tradition: an intentionally shaping version of a past and a pre-shaped present, which is then 'powerfully operative in the process of social and cultural definition and identification.' Tradition cultivates its own

[4] Hélène Lipstadt, 'Learning from St. Louis: The Arch, the Canon and Bourdieu', *Harvard Design Magazine*, 14 (2001), p. 5.

> inevitability by erasing the fact of its selectivity in regard to practices, meanings, gender, 'races,' and classes.[5]

Furthermore, Pollock adds:

> The canon signifies what academic institutions establish as the best, most representative, and the most significant texts – or objects – in literature, art history or music ... The canon not only determines what we read, look, and listen to ... It is formed retrospectively by what artists themselves select as legitimating or enabling predecessors.[6]

Similarly, architectural historians Meltem Gürel and Kathryn Anthony have recently emphasised that the canon lives and is perpetuated in architectural books (and publications more generally), since it is such books that determine the 'culture, norms and values of the architectural discipline'.[7]

Since the 1970s, the issue of canons has been politicised and addressed by different disciplines. Literature and art history, informed by the fields of philosophy, cultural studies and science, have been especially prominent in these debates. In the 1970s canonisation in art and literature was famously challenged by feminists who favoured an 'explosion' of the canon to expose its repressive and discriminatory nature; some advocated abandoning the canon altogether. Subsequently, canons came under scrutiny in architecture, too. In 1975, critic and historian Reyner Banham commented that the 'canonical list of who is, and who isn't, a member of the modern movement' established by his tutor Nikolaus Pevsner in 1936 had not been 'seriously questioned, only extended a little'.[8] This study, drawing upon these debates and their identification of the

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[5] Griselda Pollock, *Differencing the Canon: Feminist Desire and the Writing of Art's Histories* (London and New York: Routledge, 1999), pp. 9–10. Pollock here quotes from Raymond Williams, *Marxism and Literature* (Oxford: Oxford University Press, 1977), p. 115. Among other relevant contemporary contributions to this discussion, see Dominick La Capra, 'Canons, Texts and Contexts', in La Capra (ed.), *Representing the Holocaust: History, Theory and Trauma* (Ithaca, NY: Cornell University Press, 1994), p. 19, and Kenneth Clark, 'What is a masterpiece?', *Portfolio*, (February/March1980), p. 53.

[6] Pollock, *Differencing the Canon*, pp. 3–4.

[7] Meltem Ö. Gürel and Kathryn H. Anthony, 'The Canon and the Void: Gender, Race and Architectural History Texts', *Journal of Architecture Education*, 59.3 (2016), pp. 66–76.

[8] Reyner Banham, *Age of Masters: A Personal View of Modern Architecture* (New York: Harper & Row, 1975), p. 12.

problematic hegemony of canonical constructs, explores the contingent forces that reaffirm canons through both repetition and exclusion.

The discussion is ongoing. Within architectural discourse, the 'canon' as an ideological construct is still a subject matter of interest, and it is defended, questioned and, sometimes, disregarded.[9] For instance, architectural theorist Markus Breitschmidt has defended the canon, arguing that 'non-canonical' approaches are 'almost useless'; according to Breitschmidt, they risk the autonomy of the discipline as they lack means of judging beauty.[10] In 2001, on the other hand, *Harvard Design Magazine* entitled their fourteenth issue 'What Makes a Work Canonical?' with the aims of questioning the canon, raising consciousness about how canons are and should be framed, and suggesting that the idea of the canon as inevitable and useful should be reconsidered by 'counterposing the judgements represented by the canon with the promptings of our own personal experience'; interestingly all the contributing articles in this issue addressed the canon as 'unable to encompass the particularities of history'.[11] Charles Jencks's article 'Canons in the Crossfire', as with the other articles in this special issue of the journal, recognised the constructed nature of the canon, while at the same time pointing out the limitations that the authors themselves enforce when expanding it.[12] As Lipstadt also argues in this same issue of the *Harvard Design Magazine*: 'Canon expansion, canon explosion, and even implosion ... are all forms of canonization; they just follow different trajectories.'[13]

[9] The 2010 conference session, 'Still on the margin: Reflections on the perspective of the canon in architectural history' (1st Conference of the EAHN, Guimaraes, Portugal, 17-20 June 2010), debated this issue. Joe Nasr et Mercedes Volait, 'Still on the margin', *ABE Journal* 1 | 2012, DOI:10.4000/abe.304. See also William S. Saunders, 'What Makes a Work Canonical?', *Harvard Design Magazine*, 14 (2001).
[10] 'Canons should be defended as they are valuable in safeguarding: a. the autonomy of the discipline, b. the merging of excellent and difficult with the popular, and c. the interplay we seek between the fluidity of our appreciation of historical events and the stability of orthodoxy': Markus Breitschmidt, 'In Defense of the Validity of the "Canon" in Architecture,' *ABE Journal* [Online], 1 (2012): http: //journals.openedition.org/abe/135; DOI: 10.4000/abe.135 (accessed 17 July 2018).
[11] Saunders, 'What Makes a Work Canonical?', p. 2.
[12] Charles Jencks, 'Canons in the Crossfire,' *Harvard Design Magazine*, 14 (2001), pp. 42–49.
[13] Lipstadt, 'Learning from St. Louis', p. 15.

The canonisation of photographic works has followed the lead of art history. There are canonical photographs and canonical photographers, and also canonical viewpoints and shots. However, in the fields of art history and the history of photography there has been an effort to expand the parameters of photography's historiography by highlighting the existence of 'other' photographs that can be attached to a normative narrative, thereby allowing for 'other kinds of history'.[14] Alternative approaches – examples of which have been characterised by an attention to materiality, as in the case of Elizabeth Edwards, or by 'differencing' in the case of Pollock – have directed attention to different ways of working with the canon within art and photography history while at the same time destabilising it.[15] This thesis aims to contribute to this scholarship by expanding the discussion and methodology to architecture.

1.2 Photographic canons

Within architectural culture, questions of inclusion – and, therefore, also of exclusion – of architects and works in historical narratives and architectural canons persist. Similarly, art historical debates about inclusion and exclusion have shaped most discussions of the canon. However, these discussions have mostly focused on questions of architectural representation, and, consequently, on the subjects or objects being photographed. Conversely, photographic canons, although present in art or photography discourses, await further exploration in architecture. Despite some important work over the last two decades, the absence of more critical debates about our everyday use of images

[14] See the work of Geoffrey Batchen, Joan Fontcuberta and Christopher Pinney, as well as compilations such as Mary Warner's *Photography: A Cultural History* (2002), Naomi Rosenblum's *World of History Photography* (1997). See also Tanya Sheehan, *Photography, History, Difference* (Hanover, NH: Dartmouth College Press, 2015).
[15] See Elizabeth Edwards, 'Objects of Affect: Photography Beyond the Image', *Annual Review of Anthropology*, 41 (2012), pp. 221–34; and Edwards, 'Looking at Photographs: Between Contemplation, Curiosity and Gaze', in Tamar Garb (ed), *Distance and Desire: Encounters with the African Archive* (New York: Steidl, 2013).

is still surprising, given that architecture is also defined, shaped, taught and understood through visual means, and especially through photography.

Although architectural culture has not yet addressed the question of the 'photographic canons' that have shaped it and characterised it, the use of the term 'architectural photography' is evidence that there is a distinct relationship between architecture and photography. This relationship is different to that found in any other discipline. Within architectural culture, photography has a distinct role that differs from its role within art history in so far as it deals with constructed, material works – buildings, cities, and related objects – rather than with photographs that exist in their own right as artworks.

Consequently, the relationship between architecture and photography has been addressed in many different ways. Some have commented that architecture has been the subject matter of photography since its inception. According to Richard Pare, for example, the photography of architecture has been central in the development of photography itself.[16] Architecture, as James S. Ackerman notes, played a determining role in the development of photography, not only because architecture 'didn't move' but also because it 'satisfied a growing interest among the bourgeoisie in the world beyond everyday experience'.[17] Photographs fixed experiences of buildings both for those who could experience them directly and for those who would never be able to do so. According to architectural historian Jean Louis-Cohen, this led to a 'multiplicity of projects and constructions [that] have come to intervene between our direct perception of buildings and our theoretical understanding of them. As a result, the iconographic repertory has assumed ever greater importance.'[18] What these studies illustrate is that, within

[16] Richard Pare, *Photography and Architecture: 1839–1939* (Montreal: Canadian Centre for Architecture, 1982), p. 12.
[17] James S. Ackerman, 'On the Origins of Architectural Photography', Inaugural CCA Mellon lecture podcast, CCA Study Centre, Mellon Lectures, 4 December 2001; http: https://www.cca.qc.ca/en/events/49994/james-s-ackerman-on-the-origins-of-architectural-photography (accessed 11 April 2018).
[18] Jean-Louis Cohen, 'The Misfortunes of the Image: Melnikov in Paris, 1925 (On Architecture and Photography)', in Beatriz Colomina (ed.), *Architectureproduction* (New York: Princeton Architectural

architecture, photography was gradually integrated as an architectural representation – often even standing in for buildings themselves – while at the same time it has also shaped the multiplicity and singularity of architectures that we recognise through visual means, thus participating in the canonisation of architectural works.

Architectural photographer Robert Elwall has argued that photography's role is to help us to understand and interpret the built environment.[19] Similarly, David Campany, contributor of the exhibition *Constructing Worlds* (2014), argues that photography enables us to 'get hold' of architecture, following Walter Benjamin's *Little History of Photography* (1931) where Benjamin argues that photography, in contrast to buildings, isolates, defines, interprets, exaggerates and even invents a cultural value for it. These are some examples just to name a few.

During the 1990s, architectural historians turned to photography, as well as to exhibitions, films and publications produced and used by architects, reading them as objects of scrutiny in their own right rather than as 'side products' of the discipline.[20] More recently, historians and critics have challenged the understanding of photography as being at the service of architecture – as well as the opposite relationship of architecture being at the service of photography – by addressing the criticality of the medium and bringing to the fore the multiple ways in which architecture and photography inform each other.[21]

Press, 1988), p. 101. I would qualify Cohen's notion of 'direct perception' by noting that such perception is culturally determined.

[19] Robert Elwall, *Building with Light: The International History of Architectural Photography* (London: Merrell, 2004). See also Eric Samuel De Maré, *Photography and Architecture* (London: Architectural Press, 1961).

[20] Beatriz Colomina and Craig Buckley (eds), *Clip, Stamp, Fold: The Radical Architecture of Little Magazines of 196x-197x* (Princeton: Actar Publishers, 2010); Christine Boyer, *Le Corbusier, homme de lettres* (New York: Princeton Architectural Press, 2011); Christine Boyer, *Not quite Architecture: Writing around Alison and Peter Smithson* (Cambridge, MA: MIT Press, 2017); and Catherine de Smets, *Le Corbusier, Architect of Books* (Baden: Lars Muller Publishers, 2006) among others. For a further elaboration on their methods, see Tahl Kaminer, 'Framing Colomina', *FOOTPRINT, Agency in Architecture: Reframing Criticality in Theory and Practice*, (2009), pp. 129–138.

[21] One example is the collection of essays, *Nineteenth-Century Photographs and Architecture* (2017), edited by Micheline Nilsen, which explicitly turned to different voices to reflect the multiplicity of approaches to photographs of architecture produced in the nineteenth century. The essays in this volume aim at rescuing works for inclusion in the canon, rather than at amplifying the scope of how photography and architecture relate to each other. Andrew Higgott and Timothy

A key theoretical starting point for this research project is Beatriz Colomina's argument that 'Modern Architecture' only becomes 'modern' through its engagement with the mass media; therefore, the mass media was the site where 'Modern Architecture' was produced. Likewise, Colomina's method of dematerialisation of buildings into photography as a mechanism of representation is also important to this research.[22] Furthermore, the use of 'photographic architecture' by architectural historian Claire Zimmerman, which includes:

> photographic influence within building design as well as the infrastructure of commercial architectural photography ... Photographic architecture also signals the commercial networks of professional architecture within which photographs circulated. The term shuttles between buildings, pictures of buildings, and audiences – perhaps similar to [Hans] Belting's definition of a 'medium' in the sense of a vector, agent, *dispositif,* that transmits neither building nor picture but rather the synergetic combination of the two.[23]

Zimmerman further comments that photographic architecture can be defined as the way photographic effects alter architectural design practices, noting how the border between a building and its public its policed by the architectural photograph.[24] Building on the writing and ideas of Colomina, Zimmerman and others, this research project is part of the scholarly effort in recent years to critically consider the relationship between photography and architecture

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Wray's *Camera Constructs: Photography, Architecture and the Modern City* (Farnham: Ashgate, 2013) takes a similar approach in its focus on the relationship between photography, the modern city, and urban design practices. Other recent studies that have addressed the intricate relationship between photography and architecture include: *Journal of Architecture*, 22.5, '20th Anniversary Anthology: The medium of architecture and the dilemmas of representation'; and *Journal of Architecture*, 21.6–7 (2016), 'Building with Light'. Recognising the timely criticality of the discussion, the CCA launched the multidisciplinary 2016–2017 CCA/Mellon Multidisciplinary project *Architecture and/for Photography*, which aimed to foster a broader and more critical understanding of photography in shaping architecture and its discourse from the nineteenth century onward, noting the importance of photography as media, mediator and a vehicle for knowledge: https://www.cca.qc.ca/en/events/55834/multidisciplinary-research-program-architecture-andfor-photography (accessed 7 August 2018).

[22] Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, MA, and London: MIT Press, 1994).

[23] Claire Zimmerman, *Photographic Architecture in the Twentieth Century* (Minneapolis and London: University of Minnesota Press, 2014), p. 6.

[24] Zimmerman, *Photographic Architecture*, p. 53.

unveiled by the recognition of 'photographic canons' as shaping agents of architectural discourse.

1.2.1 The photographic canons of the German Pavilion and the North and South American elevators

The German Pavilion in Barcelona and the North American elevators have been recognised as canonical buildings, but their set of repeated photo-reproductions have rarely been defined as 'canonical photographs'. An exception is George Dodds who, in *Building Desire*, considered the canonical phenomenon of the photographs that derives from the canonical status of the building. In Dodds' understanding, photography is an accomplice in the canonisation of the Pavilion, whereas this thesis argues that the Berliner Bild-Bericht photographs have canonical status in their own right. However, within architectural history, the acknowledged agency of the sixteen Berliner Bild-Bericht prints in determining the Pavilion's reception and interpretation, along with the postmodern re-emergence of the photographs of the elevators as 'modern icons', has facilitated in the categorisation of the photographs as 'iconic'.[25]

Few modern buildings and photographs have gained so much attention and attracted such an obsession within architectural history as the Pavilion and the elevators and their canonical images; to the extent that they are remain subject to interest almost a century after their creation. The fixation on these buildings and their photographs is one reason why they are interesting examples to explore. In addition, they are especially illustrative for this study due to the way

[25] See Nicole E. Stöcklmayr, 'Constructions and Reconstructions: The Architectural Image between Rendering and Photography', *PhotoResearcher*, 18 (2012), pp. 69–77. For discussion of the difference between 'canonical' and 'iconic', see Lipstadt, 'Learning from St. Louis', pp. 4–15. A similar use of the term 'icon', but in relation to the Pavilion, can be found in Dave Tell, 'The Rise and Fall of a Mechanical Rhetoric, or, What Grain Elevators Teach us About Postmodernism', *Quarterly Journal of Speech*, 100.2 (2014), pp. 163–85. See also Owen Hatherley, 'Silo dreams: Metamorphoses of the grain elevator', *The Journal of Architecture*, 20.3 (2015), pp. 474–88.

that the remarkable and distinctive repetition of their photo-reproductions has both established the idea of a photographic canon in architecture.

A common feature of both these canons is that they are constructed by a handful of hegemonic photographs which have been consolidated by their repetition in the printed press since their creation at the beginning of the twentieth century. In both cases, their repeated appearance in early printed media shaped the role of these two building structures within architectural discourse, thus naturalising the 'printed' as the primary and most recognised means of their dissemination. However, in both cases it is important to note that the absence of photographic negatives (particularly for the case of the Pavilion[26]) and the impossibility of a first-hand experience of both buildings – one due to its short physical existence, the other to their difficult accessibility – have been the main reasons for their repetition through printed media ever since their creation. This inherent condition of the repetition and the ensuing naturalisation of the two photographic canons by means of printed media prompts for the realisation of the repetition of the photographic prints through printed media. The consequence, therefore, is that all other dissemination platforms, such as lectures and exhibitions, where the photographs also appeared remain overlooked. One of the aims of this project is to bring these back into the discussion; moreover, this research intends to uncover the mechanisms, technologies, temporalities and spatial configurations embedded in those practices that suggest the photographic canon should not be understood as only printed.

Another reason to explore these two photographic canons together is the common context in which they emerged and which shaped the 'pre-histories' and their 'becoming'. Both surfaced within Germany at a key historical juncture: between the emergence and demise of the Weimar Republic, a period which, as

[26] With regards to the Pavilion's 1929 photographs, it is believed that all the negatives were lost when Mies's office in Berlin was bombed during the Second World War; see Franz Schulze, *Mies van der Rohe: A Critical Biography* (Chicago and London: University of Chicago Press, 1985). In relation to the elevators, no attempt has been made to consider or look for the negatives.

many scholars have argued, distinctively shaped architectural culture through the use and engagement with media, especially photography and film. The resulting flood of publications went hand in hand with the flood of photo-reproductions printed within those publications; printed media determined and shaped the emergent architectural discourse. Consequently, the emergence of the photographs of the Pavilion in architectural discourse and the migration of the photographs of the elevators into it were already determined by their nature as photo-reproductions. Both sets were presented in a similar way – with a white background, a mild but bright light on the surface and construction, and soft or no shadows – that corresponds to what photography historian Rolf Sachsse has termed the 'modern German convention'.[27]

By comparing the two photographic canons at the heart of this research, we can address the distinct ways in which each photographic canon was established and consolidated. The elevators are an example of 'as found' architecture: they are anonymous engineering structures cut out of their original engineering publication contexts, and they were brought into architecture by Gropius as the 'critic' who first 'discovered' them. The Pavilion, on the other hand, is an authored building by an already renowned modern architect who was part of the German architectural elite, and by his designing partner Lilly Reich (despite her early effacement and later acknowledgement of her contribution). The public recognition of and interest in the photographs of the Pavilion resulted, therefore, from the status of Mies as an architect and the power of his personal and professional network. For example, the publication of the Berliner Bild-Bericht prints in the avant-garde journal *Die Form* was the result of Mies's familiarity with Walter Curt Behrendt, the journal's editor. Thus, attention to the photographic canon of the elevators was initially mediated through the voice of Gropius as their adopted critic (in absence of an architect), whereas for the Pavilion it was mediated through the voice Mies as the architect (and, again, effacing Lilly Reich's). Both photographic canons emerged, therefore, as

[27] Rolf Sachsse, 'Made in Germany as Image in Photography and Design', *Journal of Popular Culture*, 34.3 (2004), pp. 43–58.

reductions of the wider photographic field to which they originally belonged: Gropius narrowed the field of 'as found' photographs of the elevators, whereas Mies carefully controlled the field.

The agency of the photographs in forming the canonical status of the buildings has also played an essential role in their selection as exemplars. On the one hand, the case of the elevators demonstrates that a building can become canonical in architectural discourse even if it is *not* part of the traditional architectural canon: the elevators are not modern architecture per se (in the way that the Pavilion is), but through their photography and dissemination they have entered the architectural canon. This demonstrates the agency of photographic repetition. On the other hand, the example of the Pavilion has a distinct condition that makes it especially relevant to this study: the destruction of the building limits its photographs and the possibility of their diversification. Such a condition does not apply to the Villa Savoye or the Tugendhat House, or the many other examples from modern architecture that could be chosen, since these buildings continue to exist and their photographic archives have continuously been expanded. What makes the Pavilion especially interesting to explore in this research is that the photographs and building have collapsed into one another in the absence of the physical survival of the Pavilion itself. The idea of a canonical building would remain if this thesis concentrated on the case of the Pavilion only and, turning to other canonical set of modern buildings (such as Mies's Tugendhat House or Le Corbusier's Villa Savoye), perpetuated the idea of an authored and controlled dissemination.

1.3 Returns

The canonical photographs of the Pavilion and the elevators have been repeatedly revisited since the 1930s by architects, historians and critics. This is symptomatic of their shared canonical status and is another reason to bring them together in this thesis. While the Pavilion has recurrently been read as a

canonical and authored building – and the Berliner Bild-Bericht photographs were taken as evidence of such mastery[28] – the grain elevators resurfaced only in the 1960s as 'images' that were used both to critique modernism and to herald postmodernism.[29]

These revisits also speak to the commonalities and singularities of the photographic canon and its 'afterlife', as that which 'poses a challenge to architectural historiography, one that sets different subjects for historical inquiry, shifts away from the products of genius, and reconstructs the role of the critical historian',[30] as well as that which 'incorporates both their pre-history and their after-history – and after-history in virtue of which their pre-history, too, can be seen to undergo constant change. They teach him how their function can outlast their creator, can leave his intentions behind.'[31] The 'afterlife' of the photographic canon allows us to explore the difficulty of engaging with the canon, to change or interrupt its chain of repetition, and to 'difference' it while at the same time inevitably perpetuating the chain of repetition by turning to it. These dichotomies will be explored by studying the work of two key historians and critics of the postmodern period, Reyner Banham and Robin Evans, who in the 1980s visited and experienced the buildings (or the reconstruction in the case of the Pavilion) at first hand, prompted by their interest in the buildings and their repeated photo-reproductions. Moreover, they revisited the modern interpretations of the buildings by re-photographing them and suggesting their

[28] Two of the many examples are Henry Russell Hitchcock and Philip Johnson's *The International Style: Architecture since 1922* (1932), and Sigfried Giedion's *Space, Time and Architecture: The Growth of a New Tradition* (1941).
[29] Though initially revisited by Vincent Scully in *American Architecture and Urbanism* (1969) to celebrate a standard of modernity, they regained strength within architectural discourse when used to announce postmodernism by Robert Venturi, Denise Scott-Brown and Steven Izenour's *Learning from Las Vegas* (1972), as well as when Fredric Jameson critiqued the elevators' photographic canon and their agency in determining their place in modern architectural historiography within the context of the emergence of postmodernism in architecture: see Fredric Jameson, 'Postmodernism, or the Cultural Logic of Late Capitalism', *New Left Review*, 146 (July–August 1984), pp. 59–92.
[30] Explained by Patricia A. Morton and drawing upon Walter Benjamin's non-progressive notion of history. In: Patricia A. Morton, 'The afterlife of buildings: Architecture and Walter Benjamin's theory of history', in Dana Arnold, Elvan Altan Ergut and Belgin Turan Ozkaya (eds), *Rethinking Architectural Historiography* (London: Routledge, 2006), p. 215.
[31] Walter Benjamin, 'Eduard Fuchs, Collector and Historian', in *One Way Street and Other Writings*, trans. Edmund Jephcott and Kingsley Shorter (London: NLB, 1979), p. 351.

own readings informed by the photographs. A comprehensive and critical reading of their photographic archives will allow for an expansion of these interpretations while simultaneously exploring the role played by their photographic material in the naturalisation and destabilisation of the two photographic canons under study.

The returns of Banham and Evans need to be understood as part of a British empiricist tradition, as characteristic of postmodernist critique, and even as 'revisionist' (as art historian Hal Foster described Banham's historical returns).[32] However, these images are also revisited by me, as a researcher who not only explores the 'pre-histories', 'becomings' and the consolidation of the two photographic canons, but, like Banham and Evans, wishes to re-explore them. My own returns to the canon should be understood as part of the same compulsion, but in my case I seek not to repeat, but instead to question how I work with the canon, to interrupt that repetition and to disrupt the photographic canon, while also suggesting ways of working with it. In their proposal for a reading of 're-turns', sociologists Christina Hughes and Celia Lury argue that 're-turns' are not just symptoms but, as the hyphenated word emphasises, are in principle 'products of repetition, of coming back to persistent troublings; they are turning overs' that are used as a means to dismantle those 'singular or unified progressive histories' in order to propose instead multi-dimensional trajectories and a de- and re-contextualisation of them.[33] I identify my returns in this study as closer to these 're-turns'. As 're-turns', they not only turn to the canon as an object of study, but, by doing so, they also aim to reveal its contingency, to suggest alternative readings and reinterpretations, to explore modes of historical analysis and understanding that can be derived from these images, and to contribute to scholarship by destabilising the naturalisation that characterises their history within architecture culture.

[32] Hal Foster, 'On the First Pop Age', *New Left Review*, 19 (January–February 2003).
[33] Christina Hughes and Celia Lury, 'Re-turning feminist methodologies: From a social to an ecological epistemology', *Gender and Education*, 25.6 (2013), p. 787.

To do so, I first turn to the archive as the sites where the photographic canon is housed. In the archive, the canon appears not as published photo-reproductions, but as singular photographic objects. The archive is the place where alternatives to the canon can potentially be found. The canonical status of the photographs of the German Pavilion and of the North American elevators has defined their photographic prints as desired archival objects – which, in turn, is symptom of the canonical status of the photographs. In contrast to the *one* set of canonical photographs of the Pavilion, and the *one* set of canonical photographs of the elevators, there are multiple photographic canons held in various archives and in the form of 'vintage' photographs, modern prints, slides, and photographic reproductions of the canonical photographs housed in the archives. The archives include: the Mies van der Rohe Archive at MoMA in New York; the Centre for Canadian Architecture (CCA) in Montreal; the Bauhaus Archiv in Berlin and Dessau; the Staatsblibliothek in Berlin; the Kunstbibliothek in Berlin; the Berlinische Galerie in Berlin; the Werkbund Archiv in Berlin; the Getty Research Institute in Los Angeles; the Le Corbusier Foundation in Paris; RIBA in London; and the Architectural Association Archive and Photo Library in London. Moreover, accessing and researching in these archives allowed me to explore different ways of working with the canon.

Today, the photographs of the Pavilion and the grain elevators exist as contact prints, lantern slides, enlargements, projections and 35mm slides. They also exist and have existed in large and small formats; they have been glossy and matte, black and white or colour, and hand-tinted; and they have been collaged, cropped, framed, hung, glued, written on, exchanged, hidden and even destroyed.[34] The photographs have been determined by their reproducibility and repurposing: they have been reframed, reprinted, and replaced; prints become negatives, negatives become prints; prints become lantern slides, lantern slides become photographs to be exhibited; prints become photomurals, photomurals

[34] On the destruction of photographs, see Geoffrey Batchen, *Forget Me Not: Photography and Remembrance* (New York: Princeton Architectural Press, 2004).

become small format photographs.[35] Photographs are not only indexical representations; they also have 'volume, opacity, tactility and a physical presence in the world'.[36] As things that 'are made, used, kept and stored for specific reasons which do not necessarily co-incide ... they can be transported, relocated, dispersed or damaged, torn and cropped and because viewing implies one or several physical interactions.'[37] These material aspects transform abstract and representational 'photography' into 'photographs' as objects.[38]

This thesis will address some of them: Walter Gropius's *lantern slides* of elevators produced from the photo-reproductions he extracted from German engineering journals in the 1920s and originally disseminated by projection in his 1911 lecture *Monumentale Kunst und Industriebau*; *photographic thumbnails*, such as the ones used by Gropius to determine the sequence of projections in his 1911 lecture manuscript; *projections*, such as those by Gropius, Banham and Evans when disseminating the elevators and the Pavilions in their various lectures; *snapshots* of the canonical buildings shot by Banham and Evans in their revisits to the buildings in their 1980s and kept in their personal collections as 35mm slides, as well as the *snapshots* by Ludwig Glaeser taken during his visit to the Pavilion's site in Barcelona in 1979; *photomurals*, such as that from one of the enlarged Berliner Bild-Bericht parts of Mies's first solo exhibition at MoMA in 1947; a *photo-reproduction*, such as the photograph that Herbert Matter shot of the Berliner Bild-Bericht photomural and which was published by Charles Eames in *Art and Architecture* in 1947; and *hand retouched photographs*, such as one Berliner Bild-Bericht retouched within Mies's office and kept as part of Sergius Ruegenberg's archive. This selection of material indicates that lectures, slides

[35] Digital images experience similar and dissimilar processes, many enmeshed in a range of material practices inherited from the social practices of analogue photographs; see Gillian Rose, *Doing Family Photography* (Farnham: Ashgate, 2010).
[36] Geoffrey Batchen, *Photography's Objects* (Albuquerque, NM: University of New Mexico, 1997), p. 2.
[37] Nuno Porto, 'Picturing the museum: Photography and the work of mediation in the Third Portuguese Empire', in M. Bouquet (ed.), *Academic Anthropology and Museums* (Oxford: Berghahn, 2001), p. 38, cited in Elizabeth Edwards and Janice Hart, 'Introduction" photographs as objects.' In: Elizabeth Edwards and Janice Hart (eds), *Objects Histories: On the Materiality of Images* (London: Routledge, 2004), p. 2.
[38] Edwards and Hart (eds), *Objects Histories*, p. 2.

(lantern slides and 35mm slides), exhibitions and critic's own collections will be prominent, and that their study will contribute to an understanding of criticism that extends to all these platforms and is not restricted to the printed form only.

By drawing attention to these multiple materialities and their different iterations of the photographs of the Pavilion and the elevators, this thesis proposes that, within architectural history and criticism, photography should not be understood as photo-reproductions only, nor as solely indexical representations. What the history of the critiques of the Pavilion and of the grain elevators based on their photo-reproductions demonstrate is 'the prevailing tendency that photographs are apprehended in one visual act ... thus become detached from their physical properties and consequently from the functional context of a materiality that is glossed merely as a neutral support for images'.[39] Instead, this thesis will draw attention to multiple material instantiations that exist when we talk about photography. It will underline that there is not just one photographic materiality – photo-reproductions in this case – but many, and that there is not just one site for the architectural photograph – the printed publication – but also many, such as the archive, the lecture hall, the exhibition space, the architectural office and the personal collection. My suggested readings of the archival materials will be prominently characterised, therefore, by close attention to the materiality (the material and physical aspects) of the photographic objects and their modes of reproduction and dissemination.[40]

Encountering the material qualities of the two photographic canons and of the alternative photographs that this thesis explores prompted a creative response

[39] Edwards and Hart (eds), *Objects Histories*, p. 1. This volume is one of the few to address the materiality of photography. For other examples, see *Materiality/Immateriality in Photography*, special issue of *PhotoResearcher*, 19 (2013); and A. Pelligram, 'The message in the paper', in Daniel Miller (ed.), *Material Culture: Why Some Things Matter* (London: University College London Press, 1998), which is a wider study on the 'material turn' in anthropology and cultural studies.
[40] Similar modes of working have been undertaken in other disciplines, such as archaeology, anthropology, material culture, and the history of photography. However, their attention has been to the nature of the object as such and has usually been related to authenticity claims, rather than to how the photographic object contributes to the understanding of what it represents or stands for.

in the form of re-stagings. Handling the photograph, the print, the 35mm slide, and the lantern slide became a means to understand how their materiality informs their readings – despite such an act transgressing archival practices, since handling material can, as archivists argue, lead to tears, creases, staining and ultimate loss of text and images (which is one reason why it is increasingly more difficult to be able to get the chance to do so). The possible ways of handling the photograph were not always direct: I redrew, mapped, re-photographed, re-enacted, re-produced and re-performed the objects; and I wrote about them and finally archived all these iterations. Later, and through a process of selection, some of these iterations contributed to the construction and definition of each chapter. This, together with my interpretation of the photographic material, derived from a close attention to the photographic content and its relationship with the context of dissemination or collection, thereby shaping the historiographical contributions of this research project.

Finally, this study calls for an understanding of criticism as a multi-layered term, with multiple sites of production and multiple producers. To exemplify this complexity, it brings to the fore the notion of 'photographic criticism', which is characterised as a criticism of the architectural and photographic canon through photography. As one of the main contributions of this study, this concept will addressed and further developed in Chapter Ten. Furthermore, this thesis considers the role of the subjective viewer – embodied by the researcher who encounters and works with the material, but also by the lecturing critic and even the attendee in the lecture hall – as an active agent in the construction of criticism. This highlights the relay of subjective voices that surfaced in this thesis: the voice of the architect, moving into the voice of the critic, and then into the voice of the researcher. By paying attention to intricate encounters with the material (often in the context of the archive and outside of the canon), and by inserting the researcher's own subjectivity into performative re-interpretations of the various photographic events in which the images emerged, this thesis establishes alternative insights to the repetition and canonical status that

characterises the two examples examined here, and that might be applicable to interpretation of other examples of photographic canon in art and architecture.

The following thesis is structured in two parts, looking first at the earlier pre-war set of photographs of the grain elevators, and second at the interwar Berliner Bild-Bericht prints. Each part begins by setting out the 'pre-history' of each of the two photographic canons (Chapters Two and Five). These chapters explore the contingency of the canon formation, the technologies involved, and the social and economic forces that shaped the formation and conditioned the canon before its serial repetition across multiple architectural dissemination platforms. Each introduction is followed by a series of chapters that, as 'returns', attend to the period of the 'becoming' canonical of the photographic canons and explore the photographic canons' 'afterlife' (Chapters Four, Seven, Eight and Chapter Nine from Part III). All 'returns' are defined by the study of singular and alternative photographic material to that of the original photo-reproductions that make the two canons so distinct. Moreover, all chapters ('pre-histories' and 'returns') are characterised by a close engagement with archival material, by a detailed and analytical readings of the images in their many appearances, and by distinct methods that will emerge from the material studied. This aiming to diversify the scholarly attention from one singular image, and instead to show how images brought into different contexts and reperformed in different ways might operate.

As mentioned before, Part I (Chapters Two, Three and Four) is characterised by a close reading of the photographs of silos. Chapter Two explores how emerging capitalist photographic practices shaped the photographs of silos as objects of commercial exchange and trade (supported by their material iterations), which at the same time informed their migration from early nineteenth century engineering journals into architecture. Readings of photographic documents such as the ones proposed by Allan Sekula, Steve Edwards and Walter Benjamin are here of relevance. Chapters Three and Four move towards a reading of the agency of the photographic image and of its materialisation as photographic

documents and projected images. Chapter Three concentrates on the emergence of the silos within architecture as emblematic of industrialisation in North America whilst at the same time emphasising their significance for modern architecture as 'art-objects'. Here the handling of the original lanternslides that Gropius initially used for the silos first dissemination, and my re-staging of their original projection, bring to the fore the significance that the notion of 'corporeality' has (as informed by late nineteenth and early twentieth century empathy theory) in the inclusion and consolidation of the silos within architecture culture. Chapter Four deals with Banham's engagement with the same material. It draws on primary archival research, mainly his 35mm slide collection and lectures and my re-stagings of them, to further question and explore Banham's changing interpretations of these building structures. These two chapters (as well as for Chapter Ten) draw upon media studies, art history, photographic history and theory as key frameworks for foregrounds essential discussions on the format of the lantern slide, of the slide-projector assembly and double slide projections that characterise art and architectural practices, and that shaped our contemporary understanding of these building structures and their photographs.

Chapters in Part II are characterised by a close reading of the relationship between the photographs as documents, and the canonical status of the building and of its photographs. It deals with the subtleties and complexities of photographs that have stood standing for the building; what Pierce denominates as an 'indexical' relationship. Chapter Five starts by introducing the question of authorship and its renewed search as symptomatic of the Berliner Bild-Bericht prints canonical status. The work of Bernard Edelman and Roland Barthes have specially informed this chapter, as well as feminist critiques of the role of the author. In Chapter Six, my encounter with a visibly retouched Berliner Bild-Bericht photograph in the archive brings to the fore a distinct kind of experience that entails subjectivity. It draws on feminist as well as on psychoanalytic and photographic theory as proposed by Krauss and Benjamin to foreground its reading. Chapter Seven explores a photograph of a photograph: the photograph

Charles Eames and Herbert Matter made of Mies's 1947 exhibition at MoMA where a Berliner Bild-Bericht appears as a standing photomural. This chapter focuses on this published photo-reproduction aiming to unveil a distinct kind of experience. One that resembles Mies's montage strategies and that is only disclosed through what Rosalind Krauss and others have called 'the camera-eye.' Chapter Eight explores questions of 'absence' and re-enactment as present in the still unknown photographs that Ludwig Glaeser shot of the Pavilion's empty site in 1979. Due to the indexical qualities of the photographs and aiming to explore the photographs' purpose and relevance, this chapter draws upon archaeology as method and practice, as well as upon history and theory of photography as the field to which 'empty site' photographs speaks more closely to. The work of Victor Burgin is here of special relevance.

As a form of conclusion, Part III (Chapters Nine and Ten) elaborates on the question of method. Ending with Evans' reinterpretation of the Pavilion as informed by his distinct use of the 35mm slide, Chapter Nine focuses on the notion of 'return' as a distinct characteristic of canonical constructs and present in all chapters of this study, and elaborates on 're-staging' as my underlying method and research practice. Chapter Ten concludes by exploring the question of difference as a necessary condition of repetition, but also, as in Pollock's suggestion, as a means to destabilise canonical constructs. However, informed by feminist theory, it instead emphasises difference as it relates to subjectivity, and elaborates on the ways that this thesis practices differently and returns 'differently.'

PART I

2

Photographs of silos

The first time I encountered the photographs of the silos – and the German Pavilion, as will be discussed later – was through photo-reproductions and publications: in Le Corbusier's *Vers une architecture*, a publication that directed me to the 1913 *Werkbund Yearbook* (*Jahrbuch des Deutschen Werkbundes*) that has always been considered as their first dissemination platform. These photo-reproductions have stood for, and even replaced, the buildings since the moment of their first publication in the early twentieth century due to the lack of a built referent in the case of the Pavilion and the difficulty of direct experience in the case of the silos. As with the Pavilion, it was the repeated published presence of the silos that triggered my interest in their archival condition. The archive was the means of focusing not on the 'many' – as the constant reproduction of the same – but on the 'one(s)' (from which the 'many' emerged) as a means to destabilise the 'many'. However, in this case the archival encounter was directed towards 'anonymous' built structures, rather than towards the 'modern masterpiece' authored by Mies van der Rohe and Lilly Reich who, as will be argued in Chapter Five, controlled the Pavilion's dissemination through printed media in the early twentieth century. Yet in this case, not only are the buildings anonymous, but so too are their photographs. The archival status of the photo-reproductions of the silos also made evident that they were not only printed photo-reproductions, but

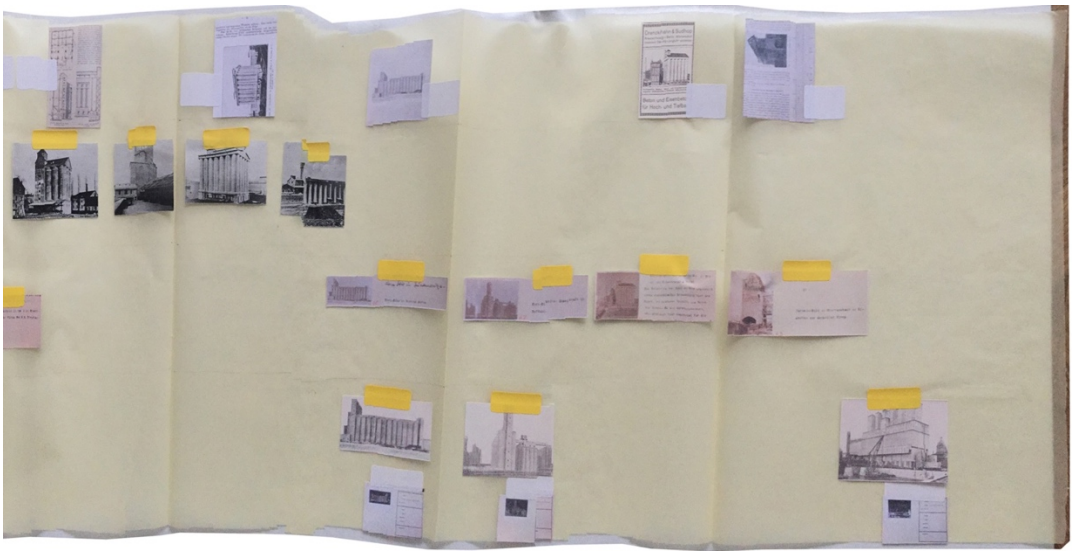
that their printed condition provoked their mobilisation into different forms of photographic media.



Figure 2.1. Reconstructed map of the appearance of the photographs of the silos. Source: Author.

Figure 2.1 responds to the four moments in which the photo-reproductions of the silos appeared over a timeframe of ten years. In all these instances (with one exception) Gropius selected the ones used. The first appearance responded to their first printed dissemination in German engineering journals that specialised in ferroconcrete constructions. The second appearance responded to the selection of photographs of silos that Gropius made for the 1911 travelling exhibition *Moderne Baukunst (Modern Architecture),* and more specifically for the *Industriebauten (Modern Industrial Buildings)* exhibition, curated by Gropius and part of the *Moderne Baukunst* exhibition. The third responded to photo-reproductions that Gropius used for his 1911 'Monumentale Kunst und Industriebau' ('Monumental Art and Industrial Building') lecture held at the Folkwang Museum in Hagen. The fourth comprises Gropius's selection of images for his 1913 article 'Die Entwicklung Moderner Industriebaukunst' ('The Development of Modern Industrial Architecture'), published in the 1913 *Jahrbuch des Deutschen Werkbundes* (*Werkbund Yearbook*). The last images are the remaining lantern slides of silos contained as part of Gropius's lifelong lantern

slide collection, which I have included in an attempt to understand which ones were used and kept throughout his career as a lecturer. These iterations will be addressed in more detail later.



The intention behind this mapping exercise was to initially map all their printed appearances. However, it proved laborious and to some extent unnecessary. Within this short period of time (1908–1913), it was possible to see how images migrated in various ways: from publication to publication; from engineering journals to architectural publications; from printed publication to slide projection; from engineering journals to the lecture hall; and from printed publication to exhibition. It also proved useful as a means to visualise how some of the photo-reproductions were either altered or even disappeared in the process. Only a selection of images remained 'stable' – a selection that constitutes the ones recognised today as canonical.

Mapping also proved useful as it made evident that the process of repetition and trade that characterised the mobility of these images in the twentieth century was defined from its beginnings. What is particular about the silos, and stands in contrast to other examples such as the Pavilion, is that this repetition was

conceived not only in printed form but also through various means of photographic reproduction that included lantern slides, format prints of different sizes, and newspaper clippings. This mobilisation into different photographic media illustrates the possibilities prompted by photography, the way that the images were used and understood within architectural culture, and their nature as objects of economic trade.

At the beginning of the twentieth century, correspondence between the different central and eastern European architects as well as with American and Russian architects and businessmen was characterised by requests for photographic material. Scholars such as Annemarie Jaeggi, Rolf Sachsse and Jean-Louis Cohen have argued that it was this 'picture trading' that gave the modern movement its international character.[1] Thus, when Reyner Banham revisited the case of the grain elevators in the 1980s, he introduced his book by arguing that modernism is 'the first architectural movement in the history of art based on photographic evidence rather than on ancient and previously unavoidable techniques of personal inspection and measured drawings.'[2]

What remains overlooked, however, is that this international 'picture trading' was also a more localised, internal and national phenomena. Exchanging images was one of the most common practices in Germany, and more specifically in Berlin at the beginning of the twentieth century as evident in figure 2.1. Costs of good quality photographic reproductions, the demands from the publishing houses, and the early establishment of image trading companies were some of the main reasons behind it.

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[1] See Annemarie Jaeggi, *Fagus: Industrial Culture from Werkbund to Bauhaus*, trans. Elizabeth M. Schwaiger (New York: Princeton Architectural Press, 2000); Gerda Breuer and Annemarie Jaeggi (eds), *Walter Gropius: Amerikareise 1928* (Berlin: Bauhaus Archiv Berlin, 2008); Rolf Sachsse, 'Mies and the photographers: Medium and Modernity as Enigma', in Helmut Reuter and Birgit Schulte (eds), *Mies and Modern Living: Interior, Furniture, Photography* (Ostfildern: Hatje Cantz, 2007); Rolf Sachsse, *Photographie als Medium der Architekturinterpretationen: Studien zur Geschichte der deutschen Architekturphotographie im 20. Jahrhundert* (Munich: Saur, 1984); and Jean-Louis Cohen, *Scenes of the World to Come: European Architecture and the American Challenge, 1893–1960* (Paris: Flammarion, 1995).

[2] Reyner Banham, *A Concrete Atlantis: US Industrial Building and European Modern Architecture 1900–1925* (Cambridge, MA: MIT Press, 1986), p. 18.

Images of North American silos or grain elevators, particularly from Buffalo and Montreal, together with one or two from South America, were some of the most popular images traded then, reproduced thereafter, and discussed still today. This chapter will explore the dissemination of the photographs and photo-reproductions of the now-canonical elevators. It will investigate their history as objects of trade and exchange and will explore how this informed the reading of the elevators as architectural, and thus singular, objects. By investigating their mobilisation in relation to photographic media and dissemination platforms, I will argue that the materiality of their different instances testifies to their nature as commodities and objects of trade. Furthermore, this chapter will explore the moment in which they were consolidated as canonical, as well as the mechanisms that such a construct implied.

2.1 Traded photographs

2.1.1 The American silos' first printed dissemination platform: the 1913 Jahrbuch des Deutschen Werkbundes

It has been repeatedly argued that the photographs of North American silos have become the best-known images of the silos and their first appearance within architectural discourse due to their publication in the 1913 *Werkbund Yearbook*, in which they appear as illustrations to Gropius's article on 'The Development of Modern Industrial Architecture' as a photographic insert (between pages 16 and 17) (see Figure 2.2). One more image appears outside this spread in the appendix at the back of the book. This is the silo in Worms, Germany, by the German engineering company Wayss und Freytag (1908) (see Figure 2.3). As a German example, rather than a North or South American one, the silo in Worms is one of the few examples that were included in Gropius's publication, but excluded from the forthcoming publications soon after. Though within the German context, one of the few publications in which it remains as a valuable architectural example was Walter Müller-Wulckow's *Blaue Bücher* collection.

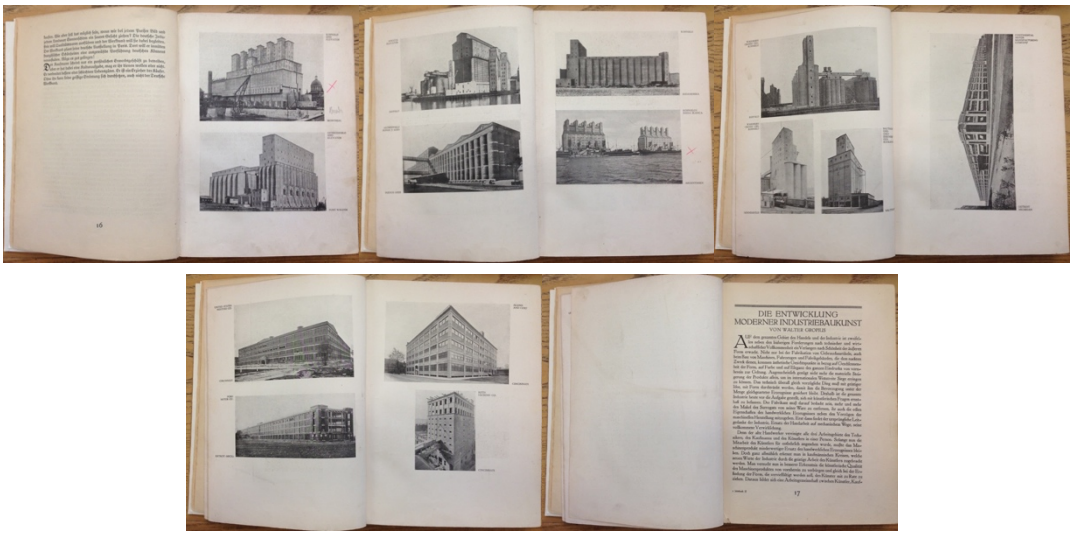


Figure 2.2. Sequence of the photographic insert where silos appear within Gropius's article 'The Development of Modern Industrial Architecture' ('Die Entwicklung Moderner Industriebaukunst'). Source: 1913 *Werkbund Yearbook* (*Jahrbuch des Deutschen Werkbundes*), Werkbund Archiv, Berlin.

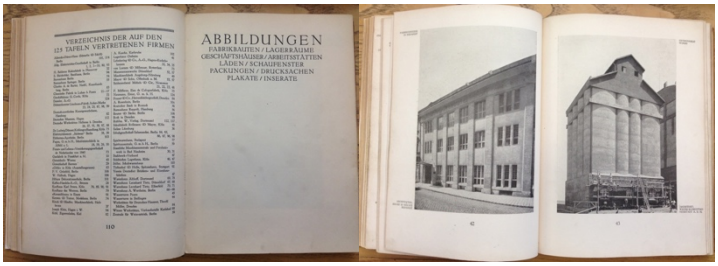


Figure 2.3. Page of the Appendix where the Worms silo appears next to a photograph of one of the AEG factories in Berlin. Source: 1913 *Werkbund Yearbook* (*Jahrbuch des Deutschen Werkbundes*), Werkbund Archiv, Berlin.

Gropius's recourse to American examples reveals a distinct attitude behind his discussion of these buildings. He ignored the provenance of some and mislabelled others as 'South American silo' when they were in fact North American. Furthermore, he avoided naming the responsible authors or engineering companies behind these built structures – clearly, they served his purposes better if they were received as anonymous, as a 'discovery' made by the architect rather than a reference to someone else's work. What this selection made clear is that Gropius's purpose was to select and, therefore, be the first to bring these structures into architecture, rather than to recognise a building, an architect, a construction company, or a responsible engineer. Yet it is worth noting that some of the photographs that appear in the appendix of the

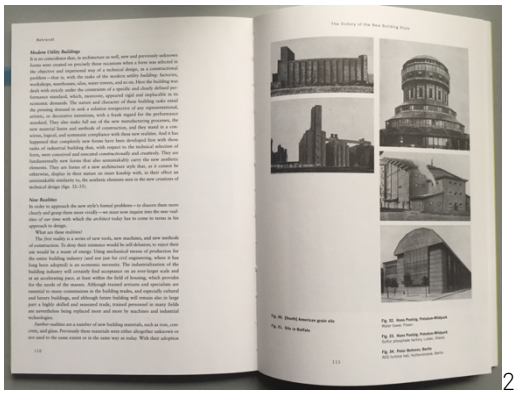
Werkbund Yearbook are buildings already familiar to engineers and entrepreneurs as exemplary buildings, and whose architects were already recognised by the printed press. In these cases, anonymity was not a possibility. Two examples are the Continental Motor Manufacturing Company Factory in Detroit, built by Albert Kahn and Ernst Wilby in 1911, and the Ford Motor Company Plant in Detroit, from 1909 (see Figure 2.2).

This selection was the primary visual source for most of their later reproductions. Their reappearance in the printed press in the 1920s and 1930s was significant. Yet, despite their repeated iteration and interpretations in the multiple publications where they appeared, the images of the elevators retain a persistent immutability. Some of the publications in which they were made available were, in Germany, Walter Curt Behrendt's *Der Sieg des Neuen Baustils* (*Victory of the New Building Style*) from 1920 (see Figure 2.4), Bruno Taut's *Die Neue Baukunst in Europa und Amerika* (*New Building Art in Europe and America*) from 1929 (see Figure 2.5), and internationally in Le Corbusier's *Vers une architecture* (*Towards an Architecture*) from 1923 (see Figure 2.6) and Mois Jakob Ginzburg's *Stil I èpocha* (*Style and Epoch*) from 1924 (see Figure 2.7), among many other examples.

By the time the Werkbund was founded (1907), publication was already the precondition for a work's existence in an architectural discourse.[3] This implies that the *Jahrbuch* had to represent, through printed media, the state of architecture or of a group of architects in a specific moment in time. Yet it is worth emphasising that the *Jahrbuch* was primarily one of the Werkbund's directed efforts to strengthen their market. As was the case with many publications at the time, the *Jahrbuch* relied on photographic dissemination, so the role of the photographs within it was significant. They were highly effective in putting together targeted propaganda. Responding to the Werkbund's

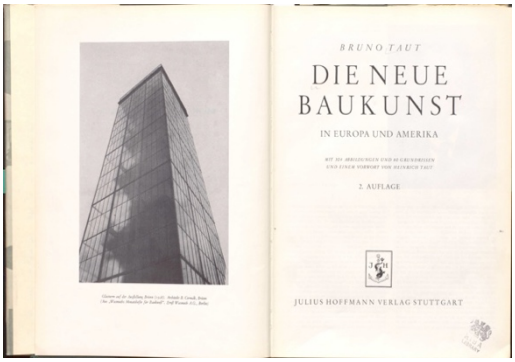
[3] Frederic J. Schwartz, 'Introduction', in *Deutscher Werkbund: Jahrbuch des Deutschen Werkbundes* 1913, with an introduction by Frederic J. Schwartz, 2nd edn (Berlin: Gebr Mann Verlag, 2000), p. 20.

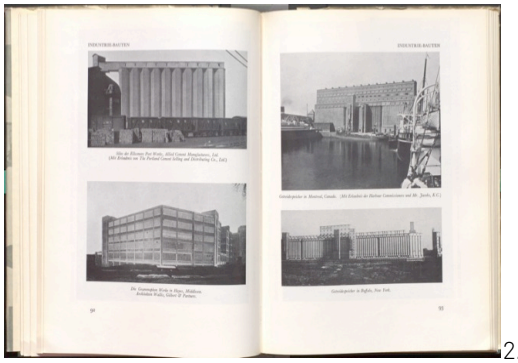
commercial strategy, the *Jahrbuch* included photographs of their own commercial products; by their inclusion, therefore, the silos were endorsed as part of this commercial enterprise.


2.4.

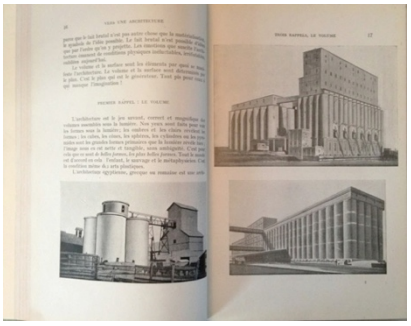


2.5.




2.6.





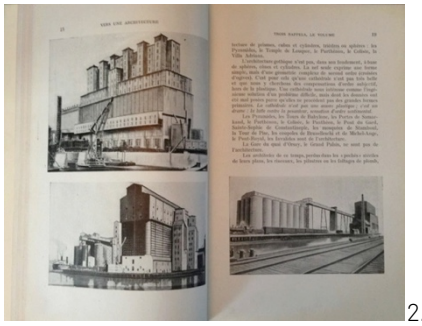

2.7.

Figure 2.4. Walter Curt Behrendt's *Der Sieg des Neuen Baustils* (1920). Source: Walter Curt Behrendt, *The Victory of the New Building Style*, trans. Harry Francis Mallgrave (Los Angeles: Getty Research Institute for the History of the Art and Humanities, 2000).
Figure 2.5. Bruno Taut, *Die Neue Baukunst* (1929). Source: British Library.
Figure 2.6. Le Corbusier, *Vers une architecture* (1923). Source: Fondation Le Corbusier, Paris.
Figure 2.7. Mois Jakob Ginzburg, cover of *Stil i èpocha* (1924). Source: Staatsbibliothek zu Berlin.

Despite the polemic, passion and detailed argumentation evidenced in the *Jahrbuch* texts, it is as 'picture books' that these books achieved their fame and influence. After the texts had lost their prominence with the end of the

Wilhelmine world, the beginning of the Weimar Republic and the November Revolution of 1918, the buildings and objects pictured still had currency. This is probably due to the unspecific relationship between image and text. The images were printed separately from the text, and, as art historian Frederic J. Schwartz argues, the images remained open to changing interests and interpretations, as well as to different uses. In the case of the silos, Schwartz comments: 'The complex and implicit interplay of the American Silos and their corresponding text confirms their importance, while at the same time invites the reader to read them "anew".'[4]

In this context, the manipulation and dissemination of the photographs of the North American silos is one of the most famous examples of images that, published as architectural works, were pulled away from the conditions of use and production. The yearbooks, in Schwartz's words, have been

> the source of many mistaken notions based on the photographs they contain instead of the study of the object and its state, construction, or plan. They have also served as a source of images that could be borrowed, altered, and then republished, set loose in a discourse with an ever more attenuated relation to the physical object.[5]

This not only demonstrates the reliance on photographic reproductions, but it has also shaped their understanding as photographs.

2.1.2 The arrival of the 'North American Silos' in Germany

As will be argued in Chapter Five, an 'authorial' search characterises some of the recent scholarship on the canonical photographs of the Pavilion. A similar phenomenon has shaped the recent scholarship on the photographs of the silos. Both the curator of the Bauhaus Archiv in Berlin, Annemarie Jaeggi, and the German historian Winfried Nerdinger argue that as early as 1910, when he was

[4] Schwartz, 'Introduction', p. 19.
[5] Deutscher Werkbund. Jahrbuch des Deutschen Werkbundes 1913. With an introduction by Frederic J. Schwartz, 2nd ed. (Berlin: Gebr Mann Verlag, 2000) p. 20

working for Peter Behrens in Berlin, Gropius began collecting a large number of photographs from as many sources as possible of both American and German grain elevators.[6] This collection served several purposes within Behrens's office, such as 'being a resource for details and providing historical examples for every kind of form or function'.[7] It is now widely recognised that Gropius's collection formed the basis of a larger collection soon after: the *Photographien- und Diapositiv-Zentrale (Photographic and Slide Centre)*, a photographic collection that complemented the Deutsche Werkbund and was part of the *Deutsches Museum für Kunst in Handel und Gewerbe (German Museum for Art in Commerce and Trade)*. It was initially housed at the Folkwang Museum in Hagen and curated by photographer Dr Franz Stoedtner. Though the museum never flourished, a great part of its photographic collection was shown to the public in different forms, such as in exhibitions, journals and yearbooks – among them the annually published Werkbund yearbooks.

Jaeggi offers the hypothesis that the elevators' images, along with images of other American industrial buildings, were originally sent to Gropius from the US.[8]. Jaeggi draws on the correspondence housed at the Bauhaus Archiv in Berlin in reaching this conclusion.[9] The second possibility, Jaeggi argues, is that they were sent by Karl Benscheidt and his son, owners of the Fagus factory, the building complex that Gropius was drafting at the time. During their stay in the US, they sent postcards of distinct buildings that could have been useful for the

[6] Winfried Nerdinger, *Walter Gropius: Der Architekt Walter Gropius. Zeichnungen Pläne Fotos Werkverzeichnis* (Berlin: Mann, 1985), cited in Rolf Sachsse, 'Made in Germany as Image in Photography and Design', *Journal of Popular Culture*, 34.3 (2000), p. 51. See also Hadas Steiner, 'The Grain of the Image', in Miriam Paeslack (ed.), *Ineffably Urban: Imaging Buffalo* (Farnham: Ashgate, 2013), pp. 117–27; and M.J. Brown, 'Walter Gropius and Grain Elevators: Misreading Photographs', *History of Photography*, 17.3 (1993), p. 306.

[7] Sachsse, 'Made in Germany', p. 51.

[8] This has also been argued by Cohen in *Scenes of the World to Come* (1995).

[9] For example, a letter from Alma Mahler who, in her stay in New York from October 1910 to March 1911, sent Gropius 'architectural things' and 'architectural brochures'. According to Jaeggi, this may be what he referred to in a letter to Karl Ernst Osthaus, director of the Folkwang Museum and member of the Werkbund, on 2 February 1911: 'I have recently received images of some new and very beautiful American concrete buildings, which you may not know; ... naturally, I'll be glad to make them available for inclusion in the collection': see Breuer and Jaeggi (eds), *Walter Gropius: Amerikareise*.

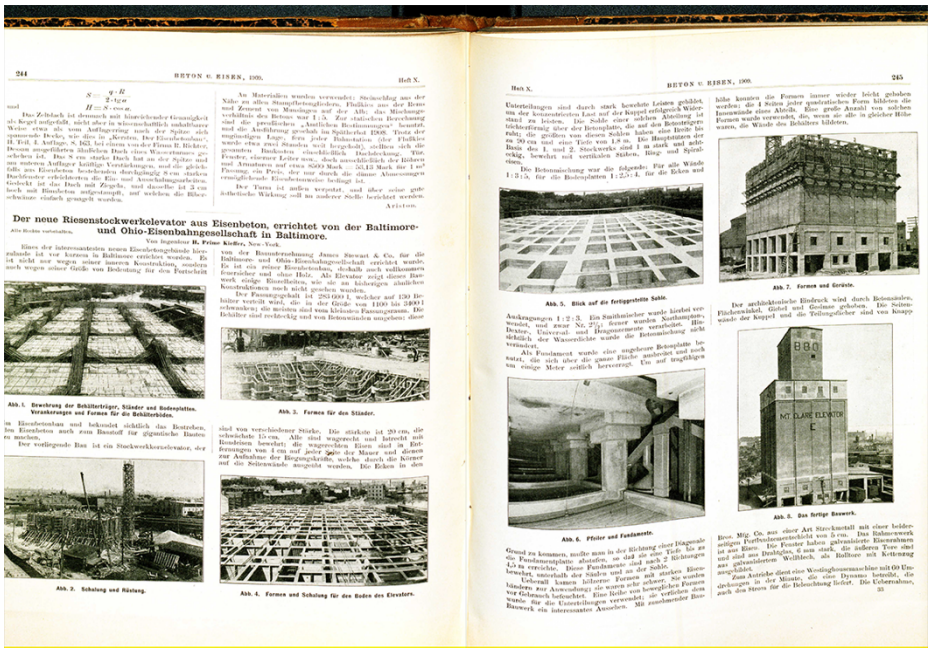
development of his own architecture and construction methods.[10] Furthermore, curator Sabine Röder argues that Karl Ernst Osthaus, director of the Folkwang Museum, acquired advertising brochures from contacts in Newark, from which Gropius and Osthaus then made a selection of photographs.[11]

Although the hypothesis that the provenance of these reproductions was the United States is accepted, it is also possible that they came from local sources. Winfried Nerdinger was the first to acknowledge that two of the photographs published in the 1913 *Werkbundes Jahrbuch* and projected during Gropius's lecture in Hagen in April 1911 had been obtained and appropriated from one of the many German concrete engineering journals of the time: *Beton und Eisen*. My archival research discovered further evidence for this argument: the 'Silo und Elevator der Baltimore & Ohio Eisenbahn-Gesellschaft in Baltimore' had been taken from an issue of *Beton und Eisen (Concrete and Iron)* (see Figure 2.8); the 'Korn Silo in Buenos Aires' had also been published in *Beton und Eisen* (see Figure 2.9); and the 'Kornsilo in Minneapolis by Washbrun Crosby' came from a 1908 issue of the journal *Zement und Beton (Cement and Concrete)* (see Figure 2.10). Even the silo wrongly captioned by Gropius as 'Sudamerika' had been published in *Eisenbeton (Ferroconcrete)* in 1909 (see Figure 2.11).

Photo-reproductions of elevators also appeared and were published in many other contemporary engineering journals that focused on the developments of ferroconcrete as the modern material.[12] These include: *Handbuch für Eisenbetonbau (Manual for Reinforced Concrete Construction)*; *Oster Ingenieur Arkitekt (Eastern Engineer Architect)*; *Eisenbeton (Ferroconcrete)*; *Der Industriebau (The Industrial Building)*; *Zement und Beton (Cement and Concrete)*; and *Beton Zeitung (Concrete Newspaper)*. In addition, photo-reproductions also appeared in promotional brochures and publications for companies such as

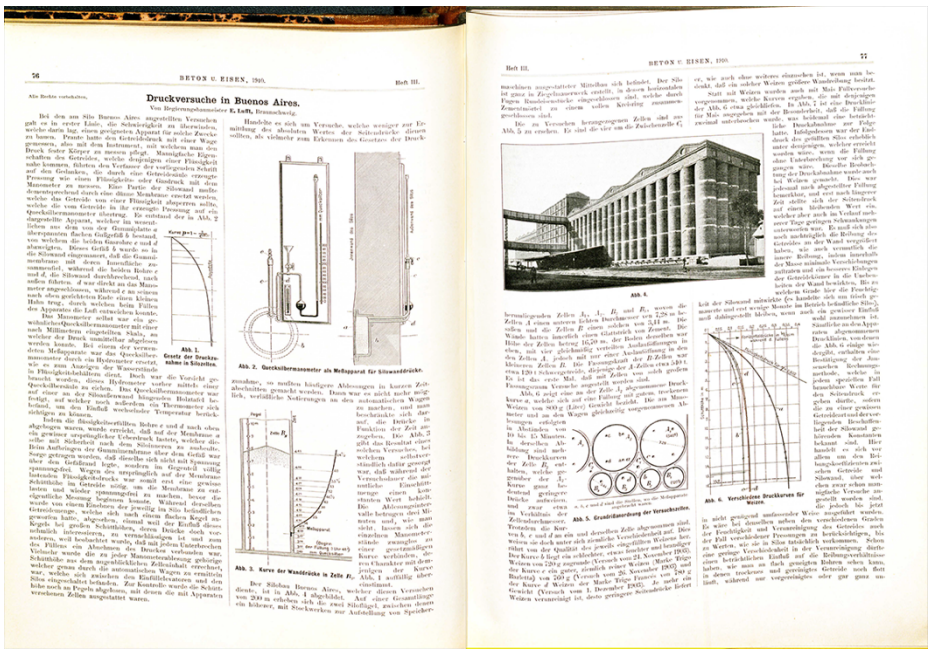
[10] Jaeggi, *Fagus*, p. 50.
[11] Sabine Röder and Fiona Elliot, '"Moderne Baukunst" 1900-14: The Architectural Collection of the Deutscher Werkbund', *Journal of the Decorative Arts Society 1850–the Present*, 22 (1998), p. 14.
[12] For further elaboration on concrete as a modern material, see Adrian Forty, *Concrete and Culture: A Material History* (London: Reaktion, 2012).

Wayss und Freytag, evidence that the role played by photography was not only to document but to promote a project to be consumed. In all cases, concrete silos were one of the most popular subjects. For instance, a 1913 issue of *Silobauten in Beton und Eisenbeton (Silo Construction in Concrete and Reinforced Concrete)* was dedicated entirely to the design and construction of silos.



Der neue Riesenstockwerkelevator aus Eisbeton, errichtet von der Baltimore- und Ohio-Eisenbahngesellschaft in Baltimore.

Figure 2.8. 'Der neue Riesenstockwerkerelevator aus Eisbeton, errichtet von der Baltimore-und-Ohio-Eisenbahngesellschaft in Baltimore', taken from *Beton und Eisen*, 8.10 (22 July 1909), p. 245. Source: Staatsbibliothek, Berlin.



Druckversuche in Buenos Aires.

Figure 2.9. 'Druckversuche in Buenos Aires', from *Beton und Eisen* 9.3 (20 February 1910), p. 77. Source: Staatsbibliothek, Berlin.



Warenspeicher in Lexington.

Unser Bild zeigt einen Eisenbetonspeicher von beträchtlicher Größe, der kürzlich in Lexington, Kentucky, Vereinigte Staaten von Nord-Amerika, errichtet wurde. Er bedeckt eine Grundfläche von 12,20 × 45,75 m und hat mit dem Keller vier Stockwerke. Er besteht aus elf Reihen von je vier Pfeilern von 47 cm × 47 cm Querschnitt in 4,6 m Abstand voneinander, die durch wagerechte Balken von 47 × 47 cm Querschnitt miteinander verbunden werden. Pfeiler, Balken und Decken haben Eiseneinlage nach der Bauweise Kahn. Die Pfeiler ruhen auf Fundamenten von 1,2 m × 1,2 m, die in den Fußboden hineinreichen. Die Fußböden bestehen aus einer 20 cm starken Eisenbetonplatte, auf welcher Hohlziegel verlegt wurden, die man mit einer Zementschicht überzog. Das Dach ist 15 cm stark. Der ganze Bau soll mit Mauerwerk verblendet werden. Die Bauzeit sollte 6 Wochen betragen; sie wurde aber überschritten, weil ein im Grunde liegendes Kanalisationsrohr verlegt werden mußte.

Kornsilo aus Eisenbeton.

K.

Warenspeicher in Lexington, Kentucky.

Bücherschau

Führer durch die Sammlungen des Deutschen Museums von Meisterwerken der Naturwissenschaft und Technik in München.

liegende Führer durch die Sammlungen erschienen, der einen guten Ueberblick über den reichhaltigen Stoff gestattet. Es ist kein trockener Katalog geworden, sondern er bildet einen zuverlässigen, in jeder Beziehung mustergültigen Begleiter durch die Sammlung, der bei aller Knappheit des Ausdrucks alles Wissenswerte über die einzelnen Gegenstände enthält. Die guten Bilder und Pläne gestatten ein mühelosen Zurechtfinden selbst für den Nichttechniker. Als besonderen Vorzug möchten wir den billigen Preis anführen, der diesem Führer eine weite Verbreitung sichern wird.

Brief- und Fragekasten.

Die Antworten und Anfragen sind dem Leserkreis erfolgen kostenlos. Anfragen nach Bezugsquellen gebeten in der Anzeigenteil. Anfragen ohne Nennung sind keine Berücksichtigung. Aller abgedruckte Antworten aus dem Leserkreis werden bezahlt, eine Antwort kann aber nur Antworten finden, wenn sie vollkommen ist und binnen acht Tagen nach Veröffentlichung der Frage einläuft. Spätere Einsätze werden nur abgedruckt, wenn sie als Richtigstellung einer erteilten Antwort anzusehen sind. Nennungen von Firmen sind nur im Notfall zu

*) Zu beziehen von der Geschäftsstelle von „Zement und Beton".

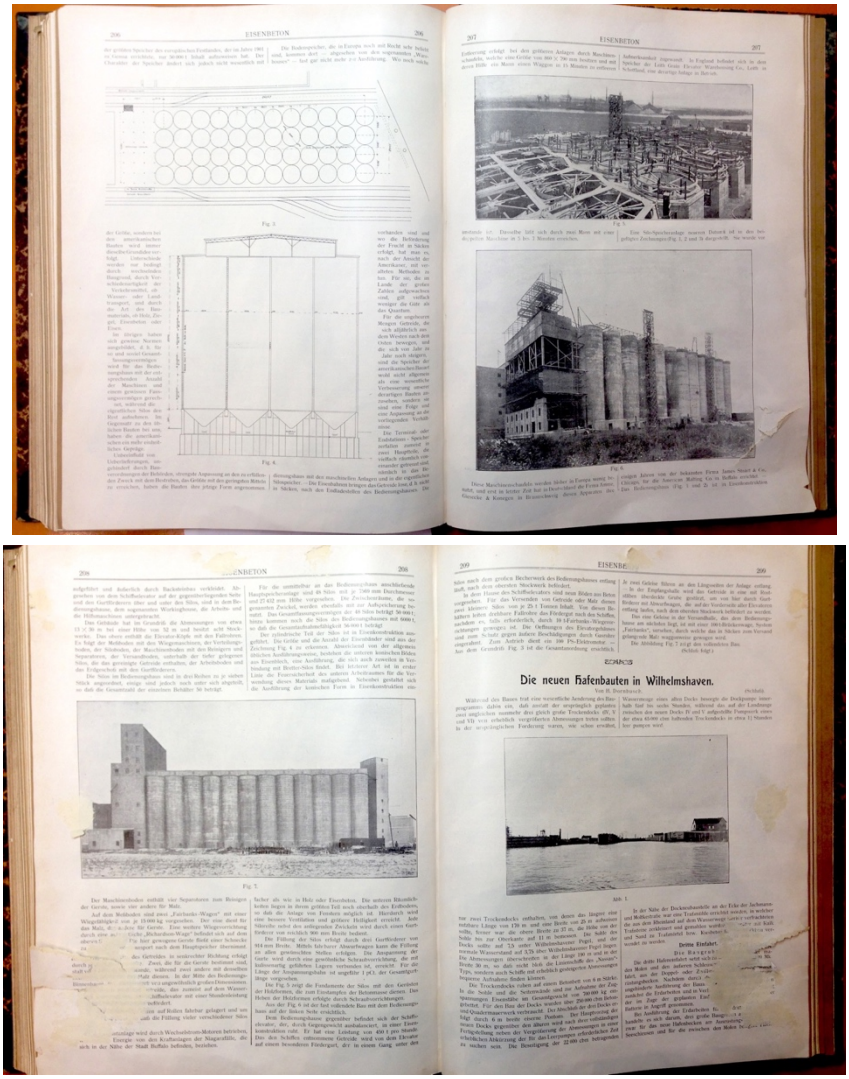


Figure 2.10. ‘Kornsilo aus ausbeton’ Minneapolis by Washburn Crosby, from *Zement und Beton* (1908), p. 330. Source: Staatsbibliothek, Berlin.

Figure 2.11. ‘Amerikanischer Speicherbau’ from *Eisenbeton*, 4 (20 February 1909), pp. 205–08. Silo wrongly captioned by Gropius as ‘Sudamerika’. Source: Staatsbibliothek, Berlin.

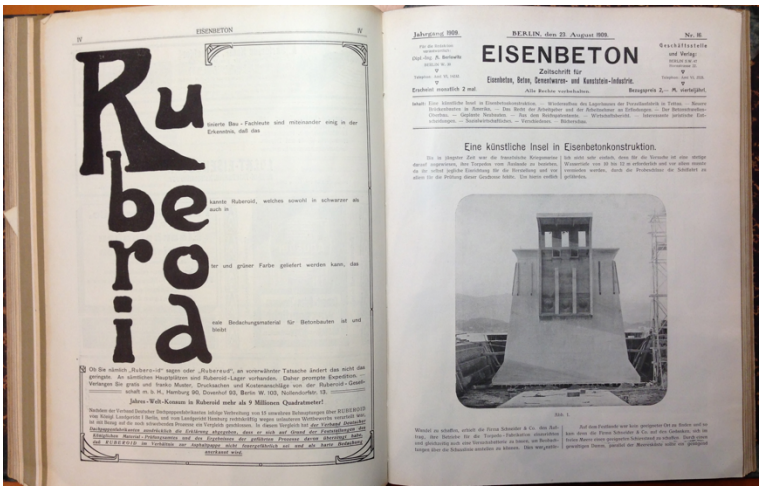


Figure 2.12. Torpedo base in ferroconcrete, from 'Eine künstliche Insel in Eisenbetonkonstruktion' *Eisenbeton*, 16 (23 August 1909), pp. 151–54. Source: Staatsbibliothek, Berlin.

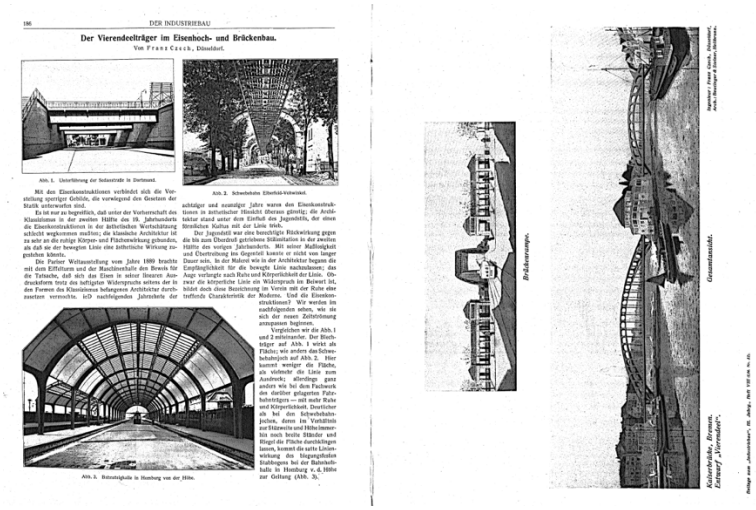


Figure 2.13. See image left corner below. From 'Der Vierendeelträger im Eisenhoch-und Brückenbau' *Der Industriebau*, 8 (15 August 1912), p. 186. Source: Staatsbibliothek, Berlin.



Figure 2.14. Silo in Worms on the left and concrete bridge on the right. From *Anzeiger Zu 'Beton u. Eisen'*, 5 (1910), pp. 15, 19. Source: Staatsbibliothek, Berlin.

This archival research highlighted Gropius's selection of photo-reproductions regardless of their publication context. Most of the built examples that he used in his 1911 lecture were appropriated from articles (as previously demonstrated), but some were from advertising clippings (see Figure 2.14). For instance, the French torpedo base in ferroconcrete was published in the same journal as the wrongly captioned Sudamerikan silo in *Eisenbeton* (see Figure 2.12). The Zeppelin hall in Hamburg was published in *Der Industriebau* in 1912 (see Figure 2.13).

Finding these images within their original publication contexts of engineering journals allows for a distinct understanding of Gropius's use of the photographic images. The published photographs were not only of the silo as a finished building – as Gropius publicised them – but also of the image of the silo as a result of its construction process and of a clear understanding and rationalisation of ferroconcrete. The canonical photo-reproductions of silos as architectural objects are, therefore, one of many images that portrayed the process of construction of such structures: they were not framed as individual objects but rather as part of a process, and they were even accompanied by construction drawings. Isolating the image implied isolating the elevator as a silo and as an object of contemplation.

Several points can be made in relation to this. First, it gives a different understanding of the printed press within architectural discourses. Engineering journals were already being distributed extensively in Germany by the time architecture started to be published as built works and through texts accompanied by photo-reproductions. In the case of the engineering journals, and in contrast to the Werkbund yearbooks, images of elevators were printed alongside their texts. Second, engineering publications (mainly journals) focused on construction processes of built forms, so the built object had to be read as the result of such a process and not as a singular object. Third, ferroconcrete was the modern material used extensively in the silos; hence, ferroconcrete had to be the focus of the articles. What architecture seemed to have done – or what Gropius

did when appropriating the images, isolating them from their contexts and inserting them into architectural discourse – was to borrow from engineering journals by prioritising the singular object-bound photographic reproduction – a distinct characteristic of architectural photography.[13]

Moreover, encountering these images in these engineering and commercial journals attests to an economy of photographic trade that shaped and determined these publications in terms of both its audience and its scope. Though German-focused, these journals contained an important number of examples from abroad. In these cases, photographs and texts were usually commissioned by an engineer working on the project. Their role was to photograph the construction process, collect its construction drawings and write about it before shipping it to Germany for publication. Less commonly, the journals commissioned German journalists to travel abroad.

This demonstrates that articles and/or photographs were already considered as objects of trade and that Gropius's use of the images was shaped by underlying picture trade economies and the status of images as commodities. In relation to the photographs of the silos and the early construction of their photographic canon, it is clear that their dissemination history has to be understood through the lens of the economies of trade that shaped their repeated iteration in publication. Art historian Steve Edwards has underlined the importance of this approach within art history. For Edwards, aesthetic questions around photography have been 'integral to the business of photography' since its inception – or at least since professional photographers decided to call themselves artists. However, he continues, photography appears simultaneously in a different context that is framed by Karl Marx in *Capital* as a new branch of production that responded to patterns of mechanisation and that dominated the

[13] For a wider understanding of photographic framing and material qualities of photographs and their reproductions in Germany, see Sachsse, 'Made in Germany'.

economy.[14] In Walter Benjamin's words, 'Photography's claim to be an art was contemporaneous with its emergence as commodity.'[15]

2.1.3 The exhibited photograph – Industriebautenausstellung

The previous section addressed how Gropius consolidated the status of the silos within architecture by means of isolation and omission. This strategy was further consolidated when Gropius mobilised the isolated photo-reproductions into other photographic modes and dissemination platforms. The travelling exhibition *Industriebautenausstellung (Industrial Building)* was one such platform on which Gropius's strategy of recycling and repeating (photographs and motifs) is apparent.

In March 1911, and alongside the preparation of his lecture on 'Monumental Art and Industrial Building', Gropius assembled a touring exhibition with photographs of industrial buildings for the travelling Deutschen Museum, which was also directed by Karl Ernst Osthaus.[16] The museum organised exhibitions that travelled around Europe and Germany, sometimes even to the US (see Figures 2.15–2.16). The travelling Deutschen Museum had already a large collection of utilitarian objects and advertising that reflected the Werkbund's approved quality standards. These were presented to the public on different occasions and in various exhibition modalities to publicise the success of the modernist ideas that Osthaus shared with the Deutscher Werkbund.[17]

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[14] See Karl Marx, *Capital: A Critique of Political Economy*, vol. 1 (London: Lawrence and Wishart, 1954), pp. 419–20.
[15] Walter Benjamin, 'Letter from Paris (2): Painting and Photography', in Benjamin, *Selected Writings*, Vol. 3: *1935–1938* (Cambridge, MA: Belknap/Harvard University Press, 2002), p. 240, cited in Steve Edwards, *The Making of English Photography: Allegories*. (University Park, PA: Pennsylvania State University Press, 2006), p. 2.
[16] This exhibition ran parallel to and as part of the *Moderne Baukunst* exhibition. Both were presented in different cities at different moments in time, though they were brought together for the Werkbund Exhibition in Cologne in 1914. See Röder and Elliot, '"Moderne Baukunst"', pp. 4–17.
[17] Sabine Röder, *Moderne Baukunst 1900–1914: Die Photosammlung des Deutschen Museums für Kunst in Handel und Gewerbe. [Ausstellung und Katalog]* (Krefeld: Stadt Krefeld, Oberstadtdirektor, 1993), pp. 8–18.



Figure 2.15. Exhibition room for the travelling exhibition of the 'Deutschen Museum für Kunst in Handel und Gewerbe' in Indianapolis, 1912. Source: *Moderne Baukunst 1900–1914: Die Photosammlung des Deutschen Museums für Kunst in Handel und Gewerbe* (Krefeld and Hagen: Kaiser Wilhelm Museum and Karl Ernst Osthaus Museum; Oberhausen: Plitt Druck-und Verlag, 1994), p. 9.



Figure 2.16. German Applied Arts at the National Arts Club, New York, 1913. Shown at the Art Institute of Chicago, 27 February–16 March 1913. Source: Judith A. Barter, 'Designing for Democracy: Modernism and Its Utopias', *Art Institute of Chicago Museum Studies*, 27.2 (2001), p. 11.

The *Industriebautenausstellung* curated by Gropius comprised American 'functional' structures as well as some works of Gropius and his *Neues Bauen* contemporaries. Unlike for the 1911 lecture, Gropius used photographs in this case to illustrate crossings between historical and contemporary architecture. He also mixed engineering structures with his own works. This further isolation of images from the space of the page (the engineering journals and then the 1913 *Jahrbuch*) to the space of the exhibition generated a catalogue of singular industrial buildings identified today as crucial to the construction of the canon of modern architecture. Intriguingly, this problematises the arguments developed by Banham, Cohen, Jaeggi and others about the migration of images from the US to Europe – for what this travelling exhibition evidences is that the photo-reproductions of elevators and of modern factories were returned to the US, but then re-presented as examples of a new building style coming from Germany.

The photographs exhibited in 1911 were re-displayed in 1914 in the rooms of Gropius's model factory in Cologne as part of the 1914 *Cologne Deutschen Werkbund Ausstellung (German Wekbund Exhibit in Cologne)*. This time Gropius had revised and expanded the exhibited items. By then it comprised almost 110 photographic items. Gerda Breuer has described the layout of the exhibition:

> While most of the industrial photographs, such as the pictures from the Photograph and *Diapositiv Centre*, were mounted on brown boards in large format and carefully tinted, the Cologne exhibits came across soberly and objectively. The variously dimensioned, significantly smaller formats were mounted using black calico strips; metal eyelets for nails were fastened to the corners.[18]

For Breuer, this could be interpreted as a means to focus on the information and to emphasise the 'purposive rationality' that kept the functionalist ideal of the architecture of the time. Judith A. Barter has argued that one of the aims of the exhibition was to show that 'architects could work together with merchants and

[18] Gerda Breuer, 'Advertising for Own and New Building: Walter Gropius and Photography', in Breuer and Jaeggi (eds), *Walter Gropius: Amerikareise 1928*, p. 95.

industrialists to produce affordable objects to improve the public taste. All the objects were for sale'.[19]

Yet the curatorial intention goes beyond that. This mode of exhibiting homogenised the mixture of 'found' images together with the produced objects (as created and designed by the Werkbund).[20] It represents the awareness of the value of exhibited photographs[21] – their 'exhibition value' to borrow Benjamin's term, and defined by the antagonism between the artwork in its uniqueness and the artwork as a reproducible entity.[22] While the art object and its 'cult value' stand in the centre of a discourse, the photograph, characterised by its reproducibility, holds an 'exhibition value' that can access other potential consumers. It stands, therefore, as a vehicle for potential political struggle while at the same time being at the service of the press.

In all exhibitions photo-reproductions were presented as photographs with their distinctive material qualities, thereby achieving the status of an exhibition object. The photo-reproduction has been mobilised within the exhibition space. The *Photographien- und Diapositiv-Zentrale* served as their image bank. As architectural historian Gerda Breuer notes, the Werkbund also built a *Propaganda- und illustrations-Zentrale* in Berlin, with chosen photographers producing their own prints to satisfy the growing need of material to illustrate the lectures, publications and exhibitions of the Werkbund.[23] The *Photographien- und Diapositiv-Zentrale* in Hagen should be understood in the same way.

[19] Judith A. Barter, 'Designing for Democracy: Modernism and Its Utopias', *Art Institute of Chicago Museum Studies*, 27.2 (2001), p. 11.
[20] Mixing the 'found' with the 'own' is an exhibition strategy used later by Smithson and Eames, and is now recognised as commonplace.
[21] For a more detailed analysis of exhibited photographs, see Olivier Lugon (ed.), *Exposition et medias: photographie, cinema, television* (Lausanne: L'age d'homme, 2012). Detailed information about these publications can be found in Röder, *Moderne Baukunst*.
[22] Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', in Benjamin, *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken Books, 1969).
[23] Breuer and Jaeggi (eds), *Walter Gropius: Amerikareise 1928*.

Recent scholarship has suggested that Berlin photographer Dr Franz Stoedtner offered to join and consolidate the centre's work, while at the same time continuing to provide services to the Werkbund.[24] Thus, Stoedtner's *Institut für wissenschaftliche Projektions-Photographie (Institute for Scientific Photographic Projection)* worked alongside the Werkbund for the Hagen *Photographien- und Diapositiv-Zentrale*.[25] Stoedtner commissioned photographers to travel abroad and photograph buildings that Osthaus and the Werkbund requested. However, Stoedtner's enterprise was more ambitious than that. To illustrate the extent of Stoedtner's business, Figure 2.17 shows, for instance, one of his many commercial catalogues entitled *German Sculpture of the Middle Ages* (1935). It contains a list of areas of Germany where images are available, as well as the respective prices depending on the type of photographic reproduction requested, and the time of reproduction and delivery (100 slides could take up to five to six days) (see Figure 2.17). The Staatsbibliothek in Berlin and the British Library in London hold other versions of some of Stoedtner's many commercial catalogues, and archives such as the Getty Research Institute in Los Angeles, the Bauhaus Archiv in Berlin and Dessau, the Kunstbibliothek in Berlin and the Berlinische Galerie hold lantern slides relating to other subjects. Gropius's archive was mostly constructed from images derived from Stoedtner's photo agency. However, Gropius was also part of the chain of commodification through his purchase and sharing of images with Stoedtner.

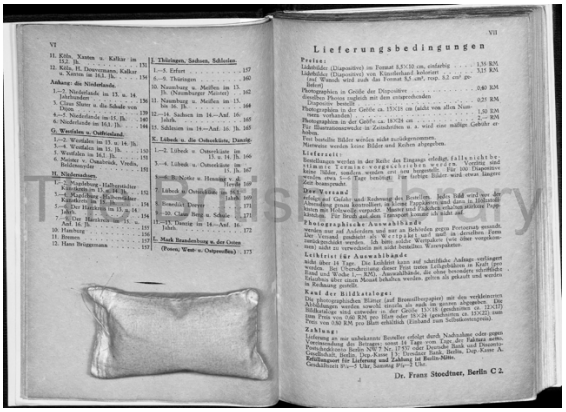


Figure 2.17. Franz Stoedtner, *Deutsche Plastik es Mittelalters* (Berlin: Verlag, 1908). Source: British Library.

[24] Röder and Elliot, '"Moderne Baukunst"', pp. 4–17

[25] What remains of Stoedtner's Diapositivzentrale is part of the Bildarchiv Foto Marburg at the Deutsches Dokumentationszentrum für Kunstheschichte and can be accessed online at fotomarburg.de.

Stoedtner's photographic collection did not, however, start with the Werkbund. Its origins could be traced almost back to the end of the nineteenth century when Hermann Grimm, the Professor of Art History in Berlin and Wolfflin's teacher, started using technologically reproduced images for his teaching. Aided by a technical apparatus called a sciopticon (known today as 'magic lantern'), double and/or single images were projected, encouraging comparisons between them. It was precisely this initial slide projector that prompted the construction of the first photographic (slide) collection, housed today in the Humboldt University, Berlin.

The precise images that Gropius used in the exhibition remains an unanswered question. The bombing of the Werkbund offices in the Second World War destroyed almost all the material, making any reconstruction difficult. Part of the exhibition has been preserved at Hagen's Deutsches Museum, now based in Krefeld. When organising the archive in the 1980s, some of the photographs were identified. Today, as part of the overall restoration of the museum, they cannot be seen in their original form.[26]

2.1.4 The projected photograph: 1911 'Monumentale Kunst und Industriebau' lecture

German historian Winfried Nerdinger has emphasised that Walter Gropius was an 'itinerant preacher of the Modern Movement'.[27] He delivered lectures almost weekly, wrote hundreds of articles for publications, and, in this way and on a scale different to other modern architects, advertised on behalf of modernist ideas. Gropius scholars have argued that when he started using the glass slides that accompanied his lectures and publications between 1910 and 1930, he did so merely illustratively, and that the pictorial archive he compiled served a

[26] Conversation with Sabine Röder, curator of the Kunstmuseum Krefeld, 16 August 2013.
[27] Quoted in Gerda Breuer, 'Advertising for Won and New Building: Walter Gropius and Photography', in Breuer and Jaeggi (eds), *Walter Gropius: Amerikareise 1928*, p. 77.

'purely documentary function'.[28] However, as can be seen in the unpublished manuscript for Gropius's 'Monumentale Kunst und Industriebau' lecture housed at the Bauhaus Archiv in Berlin, his use of the images was not only illustrative or documentary, for it was also a tool for the construction of his criticisms, even acting as pictorial materialisations of them (as I will argue in Chapter Seven). In contrast to Mies, whose affinity with the period's artistic avant-gardes is notable, Gropius never showed a persuasive handling of both photography and drawing, although he did take advantage of the technical medium for strategic advertising. Gropius was not only aware of the available mediums of projection and dissemination, but also of how to subordinate the medium to his own purposes. Besides exhibiting photo-reproductions as photographs, Gropius also disseminated them through projection and later through print. Exhibiting, projecting and printing them involves a different understanding of photographic reproduction, and it also requires a more complex reading of reproduction itself than is generally presented within modern architecture discourses. Moreover, it is important to emphasise that the translations between photographic modes demands an attention to them that reckons with their distinctively heterogenous materialisations.

On 10 April 1911 Gropius gave a lecture on 'Monumentale Kunst und Industriebau' at the Folkwang Museum in Hagen, a lecture originally intended to be entitled 'Die künstlerische Entwicklung im Industriebau. Praktische Vorschläge' (Artistic Development in Industrial Building: Practical Suggestions).[29] It was the first time that Gropius had written about factories as a subject of interest, and of the industrial building broadly speaking. Instead of engaging with these building types' utilitarian aspects, Gropius concentrated on the aesthetic

[28] Breuer, 'Advertising for Won and New Building', p. 77.
[29] A transformed transcription of the lecture appears in Hartmut Probst and Christian Schädlich, *Walter Gropius*, vol. 3 (Berlin: Verlag für Bauwesen, 1985–1987). The only place where the entire manuscript of the lecture can be seen is at the Bauhaus Archiv, Berlin. A translation of the lecture is in Appendix 1. Some of the remaining images of these original platforms are kept as part of the Gropius Estate, together with some silo images bought during his 1928 trip to the US, and some of the ones that he shot himself in the Bauhaus Archiv in Berlin. All these images and lantern slides can be found at Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.

effect of industrial buildings as illustrations of the possibilities of monumentality in architecture. For Gropius, if there was to be a renewal of the Baukunst ('building art'), 'in the sense of reducing it to its essence' as Sabine Röder has argued, then this process of reduction had to come from engineering design.

The typescript of the lecture consists of 37 pages from which nineteen have small-glued thumbnail photographs of buildings, bridges and other industrial structures. This manuscript allows us to visualise Gropius's exact line of thought and how it relates and depends upon the images used, thus throwing light on Gropius's reading of these photographs. The manuscript also testifies to different uses of the photographic image, which was mobilised in the lecture hall through projection and in the manuscript through diminution. Photographic reproduction technologies allowed the photo-reproductions to be used as photographic thumbnails for script purposes, and possibly also due to their accessibility and low reproduction cost. The photo-reproductions could also be converted into lantern slides (see Figures 2.18 and 2.19).

Some of the images in the lecture script appear to have been altered in the same way as the Pavilion's Berliner Bild-Bericht prints through the effacement of obstructing objects and the cleaning up of the building's silhouette. But when seeing the manuscript at first hand, it is possible to argue that this was probably done beforehand and that, contrary to the argument of Breuer and others, it was probably not Gropius himself who did it (except for one image to which I will specifically refer in Chapter Seven). The images are sized 1–2 x 2–3 centimetres, and they are copies of already published photo-reproductions. There is no drawing over the images, and no evident cropping has been done for the lecture. Instead, the drawing, cropping and retouching of many of the images used can be attributed to previous manipulations that most likely took place after the photographs had been taken from already printed sources.



Figure 2.18: Two of the remaining *Lichtbilder* (lantern slides) from Gropius's 1911 lecture. Source: Walter Gropius Diaposammlung, Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.

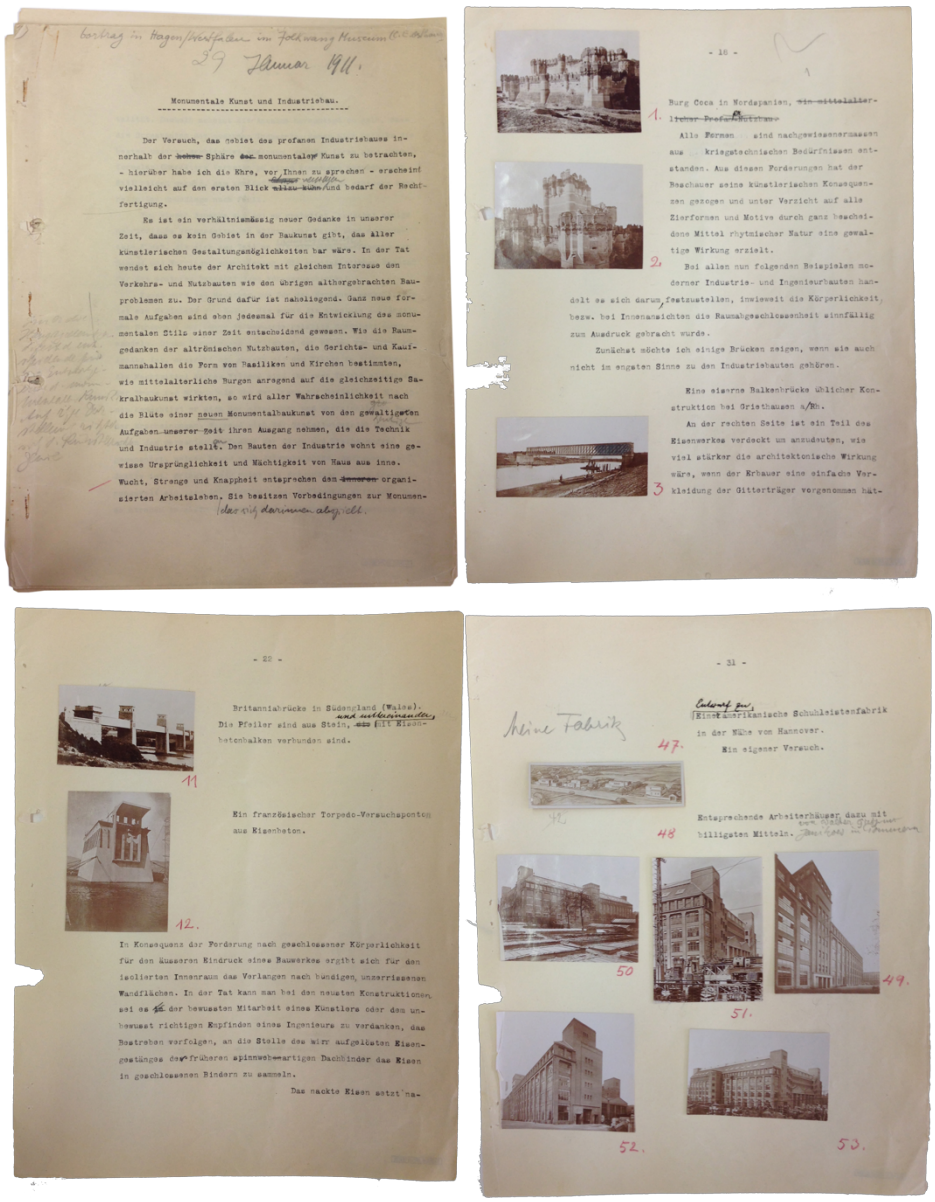


Figure 2.19: Pages 1, 18, 22, and 31 of Walter Gropius's 'Monumentale und Industriebau' lecture manuscript delivered in the Folkwang Museum, Hagen, 1911. Source: Unpublished manuscript, Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.

2.1.5 Le Corbusier

It has been argued that Corbusier brought the silos to international attention when he first published them in *L'Esprit Nouveau* (1920). In this publication Corbusier compares the chaos of the suburbs to the silos as 'ordered industrial cathedrals' (in Jean-Louis Cohen's words), even reprinting some of the photo-reproductions that Gropius used in 1913.[30] The reason behind Corbusier's repeated use of images, Banham later argued, was the 'talismanic, if not mythic, power that these images had already attained'.[31] Photo-reproductions of silos appear in the first article devoted to architecture and titled 'Trois rappels à MM. les architects; premier rappel: le volume' ('Three reminders to architects; first reminder: volume') and published in October 1920. As Stanislaus von Moos and other architectural historians have illustrated, these photo-reproductions served as the background for Le Corbusier's definition of architecture as 'the masterly, correct and magnificent play of volumes brought together in light'.[32] This article was then reprinted in May 1922 and later in 1923 in *Vers une architecture*.[33]

Interestingly, the reason why Corbusier is referred to as a critical figure in the history of the dissemination of the silos is not only because of the tone and memorability of his writing, but it was also because he was the first to alter and retouch some of the images. Corbusier deleted the dome of the Bonsecours market in Montreal to let the elevator appear by itself in the forefront. He also eliminated the triangular pediments of the elevator in Buenos Aires. Cohen, the historian who has studied Corbusier's use of the elevator photographs in most depth, refers to this as 'one of the most notorious falsifications in the history of modern architecture' (for comparison see Figure 2.20).[34]

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[30] Cohen, *Scenes of the World to Come*, p. 66.
[31] Banham, *Concrete Atlantis*, p. 217.
[32] Le Corbusier, *Vers une architecture*, cited in Stanislaus von Moos, *Le Corbusier: Elements of a Synthesis*, translated from the German (Cambridge, MA, and London: MIT Press, 1979), p. 59.
[33] For a detailed account of this publication, see Jean-Louis Cohen, 'Introduction', in Le Corbusier, *Toward an Architecture*, trans. John Goodman (Los Angeles: Getty Publications, 2007), p. 3.
[34] Cohen, 'Introduction', p. 8.

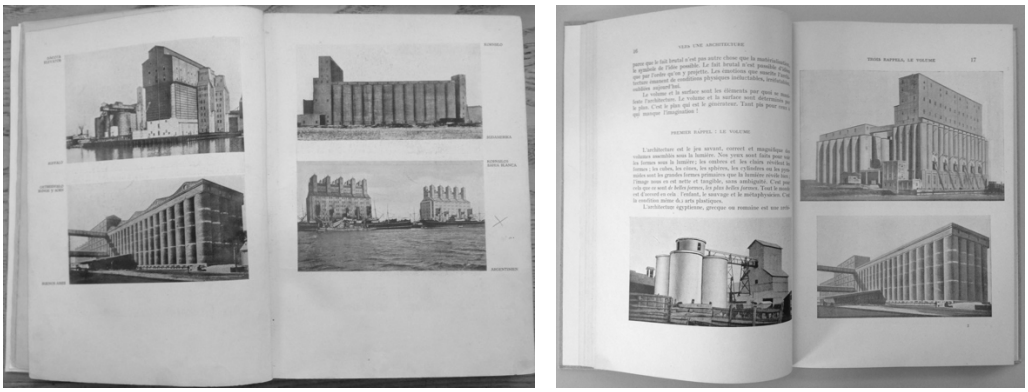


Figure 2.20. Left, 1913 *Jahrbuch des Deutschen Werkbundes*. Right, Le Corbusier's *Vers une architecture*.

As in Gropius's case, the provenance of these photographs is ambiguous. No images of silos can be found in the Fondation Le Corbusier in Paris, neither in related correspondence nor in mock-ups of publications that hold the images. However, Cohen argues that 'In his *Mémoires 1886-1962*, Ozenfant recalled their mutual interest in grain elevators, and claimed to have been given the photographs of them by the writer Henri-Pierre Roché on his return from America.'[35] Yet Le Corbusier's archive holds communications between Ozenfant, Gropius and Stoedtner as evidence that the silos' 'image transactions' were now being held internationally and outside their origins in Germany.[36] This shows that Le Corbusier was yet another modern architect seeking and buying photographic reproductions from Stoedtner. Corbusier did not request other images from Stoedtner thereafter, nor did he publish the silos again. Nevertheless, it is significant that Corbusier had been in Berlin and had met Gropius several times at the beginning of the twentieth century. It is also possible that the images of silos were exchanged at that point.

Le Corbusier was also one of the modern architects who visited North America, although not until 1935 by which point Saarinen, Mendelsohn, Neutra and others had already preceded him. No images were published from these journeys and there is no evidence of any visit to the silos. This might come as a surprise given

[35] Cohen, *Scenes of the World to Come*, p.67.
[36] T1-1, 3-26 (1926), Fondation Le Corbusier, Paris. In the same folder can be found correspondence with Gropius about photographic exchanges.

that Corbusier was a photography enthusiast whose miscellaneous collection of photographic snapshots is significant.[37] Yet Corbusier did not understand the photograph as a valuable document in itself. He manipulated the photographic documents and altered them. Moreover, as Colomina has argued, as a response to the logic of mass media and photographic reproduction, Corbusier attached meaning not to the isolated image but to its relationship to the writing, to the captions and to the layout of the pages. Corbusier's use of photographs for publication purposes materialises Barthes's explanation of a press photograph as an object that 'has been worked on, chosen, composed, constructed'.[38]

2.2 Photographs of direct experience: *Amerikareise*

By the end of the nineteenth century, German engineers such as Martin Wagner travelled to North America to study the production process of the American factory buildings at first hand. These visits were usually recorded in travelogues through verbal accounts, and sometimes they were accompanied by a few casual images that did not necessarily relate directly to their texts or descriptions. While the building as architectural object was portrayed as of no or little importance, the same cannot be said about the production process. One example concerns Walther Waldschmidt, the director of the German machine tool company Ludwig Lowe & Co. AG, who travelled to America in 1905 to 'get an overview of the American machine tool factories and an insight into the cause of their successes; to buy new machines for our enlarged machine shop and to get know new machining methods; and to recruit agencies for our newly established trading department.'[39] This emphasis on innovations of processes of production and

[37] See Beatriz Colomina, 'Le Corbusier and Photography', *Assemblage*, 4 (October 1987), pp. 6–23. In the early 1930s, over a period of two years, he took 120 film sequences and shot 6,000 stills. Tim Benton argues that, despite Corbusier's apathy about the camera, he was an active user: Benton, *LC Foto: Le Corbusier: Secret Photographer* (Zürich: Lars Müller, 2013).
[38] Roland Barthes, 'The Photographic Message', in Barthes, *Image-Music-Text*, trans. Stephen Heath (New York: Hill and Wang, 1977), p. 19.
[39] Walther Waldschmidt, 'Amerika Reise', unpublished manuscript (1905), pp. 1–12, at p. 1: Landesarchiv Berlin, A Rep. 250-01-18, Loewe Werkzeugmaschinen AG, Box 312. I am grateful to Tilo Amhoff for sharing this reference. See also Tilo Amhoff, 'The electrification of the factory, or the

construction was deliberately addressed in engineering journals in Germany at the time, the same ones from which Gropius extracted the images discussed above. These travels also reflect the German fascination for America's success that had been attained by means of rationalisation and 'narrower, specifically twentieth-century visions of industrial restructuring and economic modernity'.[40] However, some years later, the emphasis migrated from the production process held within the building to the construction process of the building itself, as evidenced by the changing visual and verbal accounts. This change occurred alongside, or most likely due to, the migration of industrial buildings from engineering publication contexts to architectural ones, which, as proved by the elevators, focused on the singular object.

The euphoria about America, as art historian Herbert Molderings has maintained, was significantly intensified by the German press of the 1920s and early 1930s – and, I would argue, even from the late nineteenth century when journals such as *Amerika* could be bought in the streets of Berlin and other cities (see Figure 2.21).[41] It was America's industrial heartland that fascinated these travellers as the 'world of continuous production and component parts, staggering productivity, and a minutely subdivided labor process'.[42] This understanding was partially the direct result of the emerging dissemination of photo-reproductions of industrial developments taking place on the other side of the Atlantic. The compulsion of many of the architects to visit the 'Motherland of Industry' (in Gropius's words) was fulfilled on many occasions through the sponsorship of businessmen; it therefore occurred with an informed and clear agenda in mind. Not coincidentally, some of the most visited factories were the Highland Park Ford Plant in Michigan and the River Rouge Plant near Detroit. It was in the 'heartland' where technical and organisational rationalisation could be

flexible layout of work(s)', in Katie Lloyd-Thomas, Tilo Amhoff and Nick Beech (eds), *Industries of Architecture* (Abingdon: Routledge, 2016), pp. 259–70.

[40] Mary Nolan, *Visions of Modernity: American Business and the Modernization of Germany* (New York and Oxford: Oxford University Press, 1994), p. 6, See also Joachim Krausse, 'Voyages of discovery for the eye and the mind', in Breuer and Jaeggi (eds), *Walter Gropius: Amerikareise 1928*.

[41] Herbert Molderlings, 'Eine Schule der Modernen Fotoreportage: Die Fotoagentur Dephot (Deutscher Photodienst) 1928 bis 1933', *Fotogeschichte*, 28.107 (2008), 5–21.

[42] Nolan, *Visions of Modernity*, p. 27.

experienced in its fully developed form. Although New York was synonymous with high-rise steel construction (among other things), and Chicago with Frank Lloyd Wright, the dominant interest for both architects and engineers was in the factory.



Figure 2.21. Journal *Amerika*, 1909. Source: Staatsbibliothek, Berlin.

Photography here played a determinant role as it spread a way of documenting that which was directly experienced. Breuer has commented that 'In the twenties, the dream of America became a kind of visual tourism':[43] visiting America meant photographing America. Most of the contemporary travel accounts come with photographic illustrations. Every photo album is full of snapshots as travelling souvenirs and documentation. As a parallel phenomenon, in the 1920s the medium of photography had become affordable for the public with the recent invention of the reasonably priced and easy to use roll of film. Taking snapshots became then a means of documentation for many photography amateurs whose interest did not lie in artistic photography but rather in the historical context or even the sentimental value attached to the images.[44]

The photographic documentation of these trips was, this study suggests, is the first attempt to interrupt the constant dissemination of the silos' iconic images. Though visitors were trying to reproduce the images they venerated, the impossibility of doing so provides a differentiation. Visiting at first hand also meant re-photographing what had previously been seen in photo-reproductions,

[43] Breuer, 'Advertising for Won and New Building', p. 104.
[44] See Peter D. Osborne, *Travelling Light: Photography, Travel, and Visual Culture* (Manchester: Manchester University Press, 2000); and Catherine Zuromskis, *Snaphsot Photography: The Lives of Images* (Cambridge, MA: The MIT Press, 2013).

yet they could never be the same. In this case, photographs were the results of direct encounters, with just the camera standing between the traveller and the building. However, this did not stop the canonical images from appearing, just as it did not take long for these photographs to join the already established trend of public dissemination through the printed press. Despite the new imagery, architects continued to publish and disseminate the traded and the engineering journal images, while also publishing and disseminating their own photographs from their US excursions.

Although the impressions of these journeys were originally recorded as diary entries and photographic snapshots, they were soon after published as photobooks or journal articles. Many of the *Amerikareise(s)* (or trips to America) started appearing as photo-reportages. For example, Adolf Rading travelled to the US in 1925 and published his views in the German journal *Der Neubau (The New Building)* (see Figure 2.22);[45] and Wassili Luckhardt travelled in 1929 and published his in *Bauwelt*.[46] There was hardly an issue of the illustrated media that did not deal with the nature of the excursions through the United States. For instance, *Querschnitt*, a journal that focused particularly on modern avant-garde movements such as the Bauhaus and Futurism, devoted an entire issue in 1932 to the US.[47]

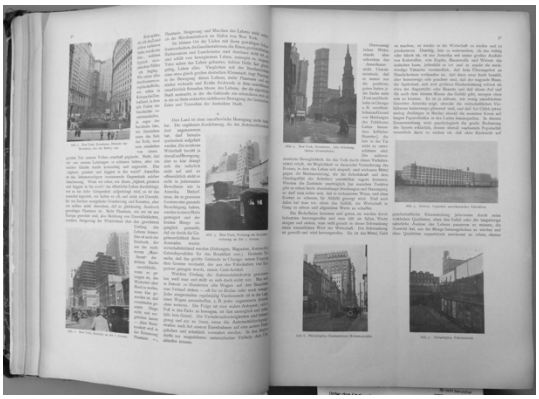


Figure 2.22. Article published by Adolf Rading describing his impressions of North America, accompanied by his own photographic shots: 'Reise nach den Vereinigten Staaten', *Der Neubau*, 7.2 (February 1925), pp. 29–33, at p. 30. Rading produced a second reportage, publishing it in *Der Neubau*, 7.5 (March 1925), pp. 57–60. Source: Staatsbibliothek, Berlin.

[45] Adolf Rading, 'Reise nach den Vereiningten Staaten', *Der Neubau, Halbmonatsschrift Für Baukunst*, 10 February 1925, pp. 29–33.
[46] Wassili Luckhardt, 'Stand der neuen Baugesinnung in Amerika', *Bauwelt*, 46 (1929), p. 1119.
[47] 'Amerika Heute', *Querschnitt*, 8, August 1932.

It was the era of America and the era of the illustrated photo magazines.[48] Advances in technology 'had made it possible not only to reproduce photographs on paper but also to make thousands of copies of those images and disseminate them in books, newspapers, and advertisements to a new and increasingly urban mass market.'[49] This phenomenon of recording travels through word and image and then publishing them was the result of the publication boom in Germany, the consolidation of photography through the possibility of reproducing images as easily as text, the dawn of the *Neues Sehen* in photography,[50] and the emergence of publication genres such as the photo-essay that would later characterise the Weimar Republic.[51] As Daniel H. Magilow has commented, it was this visual turn within Weimar Germany that characterised the way in which 'photographs took on new roles in original forms'.[52] Conversely, according to cultural historian Sabine Hake who has worked on photography within Weimar Germany, it is necessary to read this new use of photography 'through the publishing practices – of the illustrated press, the architectural profession, and the art establishment – that defined their systems of distribution and modes of consumption.'[53]

Photography determined a different type of consumption. In the 1920s and 1930s the purpose of documenting this first-hand experience went beyond private albums and collections. This was the case with Eric Mendelsohn, and with Walter and Ise Gropius's snapshots from their 1928 *Amerikareise*. For the Gropiuses, the *Münchner Illustrierte Presse* acquired a few photographs taken on their American journey. For Mendelsohn, it was the *Berliner Tageblatt* that published

[48] Herbert Molderings, 'Eine Schule der Moderne Fotoreportage: Die Fotoagentur Dephot (Deutscher Photodienst) 1928 bis 1933', *Fotogeschichte*, 28.107 (2008), pp 5-21, at p. 7.
[49] Daniel H. Magilow, *The Photography of Crisis: The Photo Essays of Weimar Germany* (University Park, PA: Pennsylvania State University Press, 2012), p. 4.
[50] The Neues Sehen, also known as 'New Vision' was an experimental movement developed in the 1920s in Germany that considered photography as autonomous practice with its own laws. It favored technical means of photographic expression. The lens of the camera performs as the eye though providing a new way of seeing, unexpected framings, angles, and contrasts. Alexander Rodchenko, László Moholy-Nagy, Lucia Moholy and Walter Peterhans are some of its most well-known representatives.
[51] See Magilow, *The Photography of Crisis*; and Claire Zimmerman, *Photographic Architecture in the Twentieth Century* (Minneapolis: University of Minnesota Press, 2014).
[52] Magilow, *The Photography of Crisis,* p. 4.
[53] Sabine Hake, *Topographies of Class: Modern Architecture and Mass Society in Weimar Berlin* (Ann Arbor, MI: The University of Michigan Press, 2008), p. 173.

some of his US photographic impressions as well as the Dutch journal *Architectura, Weekblad V.H. Genootschap, Architectura et Amicitia* (see Figure 2.23) before any of this material was compiled and published as a photobook.[54] Photographs as single objects were no longer a matter of interest; rather the interest was in the photographic document, whether this was a newspaper, a journal or a picture book. The book, as an accessible object for contemplation, focused on turning architecture into an object of contemplation.[55]

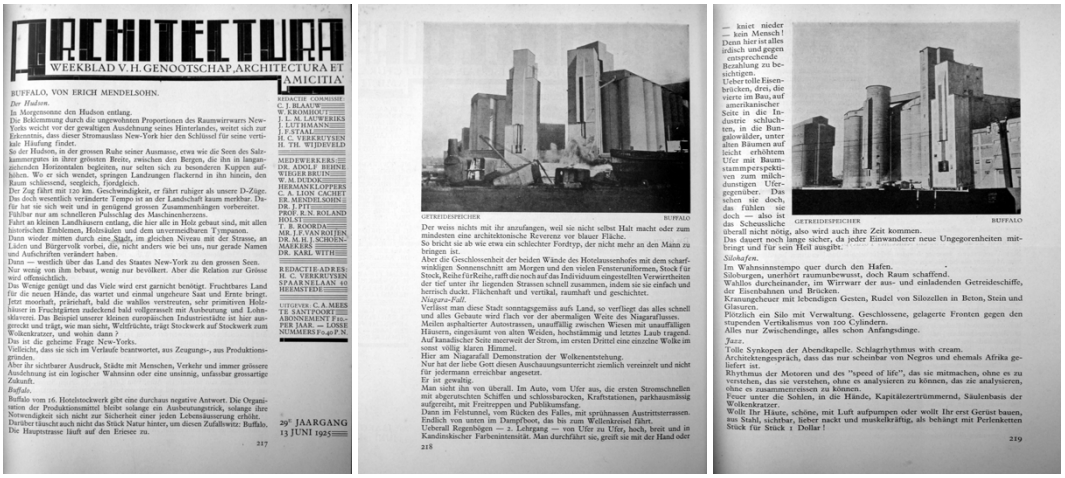

ARCHITECTURA
WEEKBLAD V.H. GENOOTSCHAP „ARCHITECTURA ET AMICITIA"
BUFFALO, VON ERICH MENDELSOHN.
Der Hudson.
In Morgensonne den Hudson entlang.
Die Beklemmung durch die ungewohnten Proportionen des Raumwirrwarrs New-Yorks weicht vor der gewaltigen Ausdehnung seines Hinterlandes, weitet sich zur Erkenntnis, dass dieser Stromauslass New-York hier den Schlüssel für seine vertikale Häufung findet.
So der Hudson, in der grossen Ruhe seiner Ausmasse, etwa wie die Seen des Salzkammergutes in ihrer grössten Breite, zwischen den Bergen, die ihn in langanziehenden Horizontalen begleiten, nur selten sich zu besonderen Kuppen auftürmen. Wo er sich wendet, springen Landzungen flackernd in ihn hinein, den Raum schliessend, seegleich, fjordgleich.
Der Zug fährt mit 120 km. Geschwindigkeit, er fährt ruhiger als unsere D-Züge. Das doch wesentlich veränderte Tempo ist an der Landschaft kaum merkbar. Dafür hat sie sich weit und in genügend grossen Zusammenhängen vorbereitet. Fühlbar nur am schnelleren Pulsschlag des Maschinenherzens.
Fährt an kleinen Landhäusern entlang, die hier alle in Holz gebaut sind, mit allen historischen Emblemen, Holzsäulen und dem unvermeidbaren Tympanon.
Dann wieder mitten durch eine Stadt, im gleichen Niveau mit der Strasse, an Läden und Bürgervolk vorbei, die, nicht anders wie bei uns, nur gerade Namen und Aufschriften verändert haben.
Dann — westlich über das Land des Staates New-York zu den grossen Seen.
Nur wenig von ihm bebaut, wenig nur bevölkert. Aber die Relation zur Grösse wird offensichtlich.
Das Wenige genügt und das Viele wird erst garnicht benötigt. Fruchtbares Land für die neuen Hände, das wartet und einmal ungeheure Saat und Ernte bringt. Jetzt moorhaft, präriehaft, bald die wahllos verstreuten, sehr primitiven Holzhäuser in Fruchtgärten zudeckend bald vollgerauscht mit Ausbeutung und Lohnsklaverei. Das Beispiel unserer kleinen europäischen Industriestädte ist hier ausgereckt und trägt, wie man sieht, Wolkenkratzer, und wohin dann?
Das ist die geheime Frage New-Yorks.
Vielleicht, dass sie sich im Verlaufe beantwortet, aus Zeugungs-, aus Produktionsgründen.
Aber ihr sichtbarer Ausdruck, Städte mit Menschen, Verkehr und immer grössere Ausdehnung ist ein logischer Wahnsinn oder eine unsinnig, unfassbar grossartige Zukunft.
Buffalo.
Buffalo vom 16. Hotelstockwerk gibt eine durchaus negative Antwort. Die Organisation der Produktionsmittel bleibt solange ein Ausbeutungstrick, solange ihre Notwendigkeit sich nicht zur Sicherheit einer jeden Lebensäusserung erhöht.
Darüber täuscht auch nicht das Stück Natur hinter, um diesen Zufallwitz: Buffalo.
Die Hauptstrasse läuft auf den Eriesee zu.
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REDACTIE COMMISSIE
C. J. BLAUW
W. KROMHOUT
J. L. M. LAUWERIKS
J. LUTHMANN
J. P. STAAL
H. C. VERBRUYSEN
H. TH. WIJDEVELD
MEDEWERKERS:
DR. ADOLF BEHNE
WIEGER BRUIN
W. M. DUDOK
HERMAN KLOPPERS
C. A. LION CACHET
ER. MENDELSOHN
DR. J. PIT
PROF. R.N. ROLAND HOLST
T. B. ROORDA
MR. J. P. VAN ROIJEN
DR. M. H. J. SCHOENMAEKERS
DR. KARL WITH
REDACTIE-ADRES:
H. C. VERBRUYSEN
S'PAARNELAAN 10
HERMSTEDE
UITGEVER: C. A. MEES
TE SANTPOORT
ABONNEMENT Fr.-
PER JAAR. — LOSSE NUMMERS Fr. 0.50 P. N.
29e JAARGANG
13 JUNI 1925
GETREIDESPEICHER
BUFFALO
Der weiss nichts mit ihr anzufangen, weil sie nicht selbst Halt macht oder zum mindesten eine architektonische Reverenz vor blauer Fläche.
So bricht sie ab wie etwa ein schlechter Fordtyp, der nicht mehr an den Mann zu bringen ist.
Aber die Geschlossenheit der beiden Wände des Hotelaussenhofes mit dem scharfwinkligen Sonnenschnitt am Morgen und den vielen Fensteruniformen, Stock für Stock, Reihe für Reihe, rafft die noch auf das Individuum eingestellten Verwirrtheiten der tief unter ihr liegenden Strassen schnell zusammen, indem sie sie einfach und herrisch duckt. Flächenhaft und vertikal, raumhaft und geschichtet.
Niagara-Fall.
Verlässt man diese Stadt sonntagsgemäss aufs Land, so verfliegt das alles schnell und alles Gebaute wird flach vor der abermaligen Weite des Niagarafl usses.
Meilen asphaltierter Autostrassen, unauffällig zwischen Wiesen mit unauffälligen Häusern, eingesäumt von alten Weiden, hochstämmig und letztes Laub tragend. Auf kanadischer Seite meerweit der Strom, im ersten Drittel eine einzelne Wolke im sonst völlig klaren Himmel.
Hier am Niagarafall Demonstration der Wolkenentstehung.
Nur hat der liebe Gott diesen Auschauungsunterricht ziemlich vereinzelt und nicht für jedermann erreichbar angesetzt.
Er ist gewaltig.
Man sieht ihn von überall. Im Auto, vom Ufer aus, die ersten Stromschnellen mit abgerutschten Schiffen und schlossbaruckten, Kraftstationen, parkhausmässig aufgereiht, mit Freitreppen und Publikumsfang.
Dann im Felsunnel, von Rücken des Falles, mit sprühnassen Aussichtsterrassen.
Endlich von unten im Dampfboot, das bis zum Wellenkreisel fährt.
Ueberall Regenbögen — 2. Lehrgang — von Ufer zu Ufer, hoch, breit und in Kandinskischer Farbenintensität. Man durchfährt sie, greift sie mit der Hand oder
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— kniet nieder — kein Mensch!
Denn hier ist alles jüdisch und gegen entsprechende Bezahlung zu besichtigen.
Ueber tolle Eisenbrücken, drei, die vierte im Bau, auf amerikanischer Seite in die Industrie schluchten, in die Bungalowsiedler, unter alten Bäumen auf leicht erhöhtem Ufer mit Baumstammperspektiven zum milchdunstigen Ufergegenüber. Das sehen sie doch, das fühlen sie doch — also ist das Scheussliche überall nicht nötig, also wird auch ihre Zeit kommen.
Das dauert noch lange sicher, da jeder Einwanderer neue Ungeheuerheiten mitbringt und für sein Heil ausgibt.
Silohafen.
Im Wahnsinnstempo quer durch den Hafen.
Silobürgen, unerhört raumunbewusst, doch Raum schaffend.
Wahllos durcheinander, im Wirrwarr der aus- und einladenden Getreideschiffe, der Eisenbahnen und Brücken.
Krauneugetreuer mit lebendigen Gesten, Rudel von Silozellen in Beton, Stein und Glasuren.
Plötzlich ein Silo mit Verwaltung. Geschlossene, gelagerte Fronten gegen den stupenden Vertikalismus von 100 Cylindern.
Alles nur Zwischendinge, alles schon Anfangsdinge.
Jazz.
Tolle Synkopen der Abendkapelle. Schlagrhythmus with cream.
Architektengespräch, dass das nur scheinbar von Negros und ehemals Afrika geliefert ist.
Rhythmus der Motoren und des "speed of life", das sie mitmachen, ohne es zu verstehen, das sie verstehen, ohne es analysieren zu können, das sie analysieren, ohne es zusammenreissen zu können.
Feuer unter die Sohlen, in die Hände, Kapitälezertrümmernd, Säulenbasis der Wolkenkratzer.
Wollt Ihr Häute, schöne, mit Luft aufpumpen oder wollt Ihr erst Gerüst bauen, aus Stahl, sichtbar, lieber nackt und muskelkräftig, als behängt mit Perlenketten Stück für Stück 1 Dollar!
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Figure 2.23: 'Buffalo' article published by Erich Mendelsohn describing his impressions of North America, accompanied by his own photographic shots, in *Architectura, Weekblad V.H. Genootschap, Architectura et Amicitia*, 29 (13 June 1925), pp. 217–20. Source: Staatsbibliothek, Berlin. I am grateful to Michele Stavagna for sharing this source.

Furthermore, while the photographic representation of industrial buildings such as factories changed to appear more in tune with the new modernism since the First World War, the elevators seem to have remained stable. Whereas factories

[54] Krausse, 'Voyages of discovery for the eye and the mind', in Breuer and Jaeggi (eds), *Walter Gropius: Amerikareise 1928*.
[55] For the wider history and discussion of the photobook, see Martin Parr and Gerry Badger, *The Photobook: A History* (London: Phaidon, 2001–2014); and Patrizio Di Bello, Colette Wilson and Shamoon Zami (eds), *The Photobook: from Talbot to Ruscha and Beyond* (London: I.B. Tauris, 2012). For a more precise relation between the photobook and Weimar Germany, see Pepper Stettler, *Stop Reading! Look! Modern Vision and the Weimar Photographic Book* (Ann Arbor, MI: University of Michigan Press, 2014); Leesa L. Rittelman, 'Constructed Identities: the German Photobook from Weimar to the Third Reich', PhD dissertation, University of Pittsburg (2002); and Patrizia McBride, 'Narrative resemblance: the production of truth in the modernist book of Weimar Germany', *New German Critique*, 115 (2012), pp. 169–97.

changed from a more functional interpretation before the war to a more aestheticised one after it, the elevators continued to represent, in Giedion's words, the 'pure beauty' that Gropius originally suggested, as well as the embodiment of what Pevsner argued was the 'rational coordination of heterogeneous functions that fascinates architects'.[56] Their status as a representation of an idealised exterior, despite their technical imperatives, coincided with the Weimar Germany's increased attention to the aesthetic purposes of architecture rather than only to its functional purposes. The exception, however, was Mendelsohn, who emphasised in some of the photographs the silos' working mechanisms and depicted them as operating mechanical structures rather than isolated, static, 'pure' and 'monumental' buildings.

2.2.1 Erich Mendelsohn – from the photographic object to the photobook as object

Erich Mendelsohn's trip to the US in 1924 has been one of the most studied *Amerikareise(s)*. This is in part because of *Amerika, Bilderbuch Eines Architekten* published by Mosse's publishing house in 1926 from which the second edition was already available in 1928 (see Figure 2.24). Mendelsohn's *Amerika* is a highly structured publication, whose aim is to explain his vision of the contemporary city. A focus on notions of Americanism is evident throughout the book, mainly due to the sponsorship of Hans Lachmann-Mosse, the publisher who had paid some of Mendelsohn's travel expenses,[57] and there is a clear manifestation of the emerging practice of photojournalism in which the photographic image takes the leading role. Mendelsohn's third book, *Russland Amerika Europa* (1929), was the outcome of a presentation at the Bauhaus Dessau in 1927 where his

[56] Nikolaus Pevsner, *Pioneers of Modern Design from William Morris to Walter Gropius* (Harmondsworth: Penguin Books, [1936], 1960), p. 214.
[57] Michele Stavagna, 'Image and Space of the Modern City in Erich Mendelsohn's Amerika: Bilderbuch eines Architekten', available online at http://e-pub. uni-weimar.de.

impressions from his trips around Russia and America were given as lectures and presented in a small exhibition (see Figure 2.25).

On 9 October 1924, Mendelsohn left Germany accompanied by the film director Fritz Lang, with the commission to write a column of 'American notes' for the *Berliner Tageblatt* (*Berlin's Daily Paper*, the newspaper owned by Rudolf Mosse). He travelled to Buffalo after delivering a lecture in New York on 'The Laws of Modern Architecture', a reiteration of his 1919 lecture on 'The Problem of a New Architecture' delivered in Paul Cassirer's gallery in Berlin. While in the US, Mendelsohn was able to revisit his views on Wright's Larkin Building, to visit the Niagara Falls, and to experience the grain elevators that Gropius had originally disseminated, and which Mendelsohn 'dreamt' with, as his early sketches demonstrate (see Figure 2.26).[58]

In letters to his wife archived at the Getty Research Centre in Los Angeles (later published as an edited book by Oskar Beyer in 1967), Mendelsohn described his experience when experiencing the silos at first hand:

> Mountain silos, incredibly space-conscious, but creating space. A random confusion amidst the chaos of loading and unloading corn ships, of railways and bridges, crane monsters with live gestures, hordes of silo cells in concrete, stone and glazed brick. Then suddenly a silo with administrative buildings, closed horizontal fronts against the stupendous verticals of fifty to a hundred cylinders, and all this in the sharp evening light. I took photographs like mad. Everything else so far now seemed to have been shaped interim to my silo dreams. Everything else was merely a beginning. Buckley says the real city for silos is Chicago. I will remain there.[59]

This image of the silo-dream, as worded by Mendelsohn, has been a matter of interest to architectural historians. For instance, for Owen Hatherley it acts as an illustration of a mediated collective dreaming generated by the travel of their photo-reproductions across the US, Germany, France and the Soviet Union. This in turn defined the silo as a merely functional structure that, via the process of

[58] Cohen, *Scenes of the World to Come*, p. 87.
[59] Oskar Beyer, *Eric Mendelsohn: Letters of an Architect* (London: Abelard-Schuman, 1967), p. 69.

repeated dissemination, acquired various imputed new meanings: 'a non-functional surplus developed that cannot be contained in any critique of Fordism or related "utilitarianism"'.[60] In other words, while the discourse on the silos was in terms of functionality, the images conveyed specific effects that exceeded the limited accounts of functionality. Years later, Banham's dream-analysis in *A Concrete Atlantis* drew attention to how these utilitarian objects became the focus of dynamic and eternal ideas and dreams.



Figure 2.24. Erich Mendelsohn, *Amerika, Bilderbuch Eines Architekten* (Berlin: Rudolf Mosse, 1926). Source: Staatsbibliothek, Berlin.

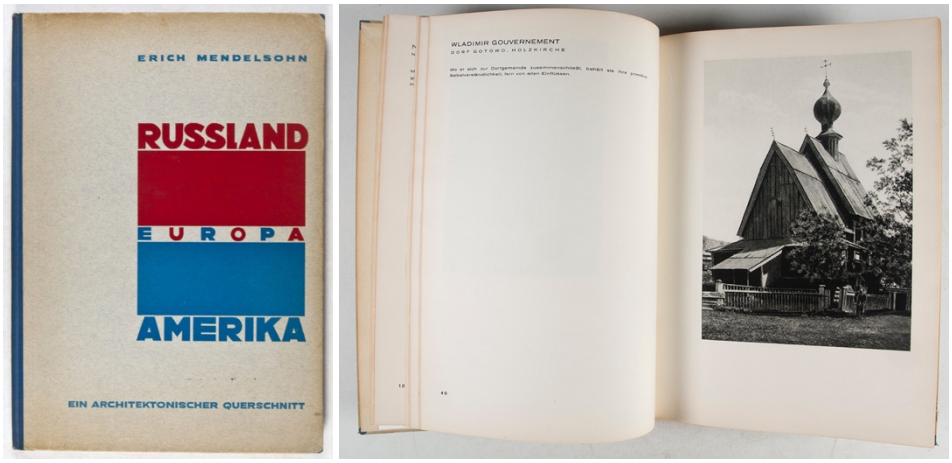


Figure 2.25. Erich Mendelsohn, *Russland, Europa, Amerika, Ein Architektonischer Querschnitt* (Berlin: Rudolf Mosse, 1929). Source: Staatsbibliothek, Berlin.

[60] Owen Hatherley, 'Silo dreams: metamorphoses of the grain elevator', *The Journal of Architecture*, 20.3 (2015), p. 479. See also Maroš Krivy, 'Industrial architecture and negativity: the aesthetics of architecture in the works of Gordon Matta-Clark, Robert Smithson and Bernd and Hilla Becher', *The Journal of Architecture*, 15.6 (2010), pp. 827–52.



Figure 2.26. Charcoal drawing and watercolour of silos (undated). Archival no. Ref. Hdz.E.M.476, Hdz.E.M.675. Source: Kunstbibliothek, Berlin. Silo on the left was published as a black-and-white image in Le Corbusier's *Vers une architecture* (1923).



Figure 2.27. Cover of Ludwig Hilberseimer, *Großtadtarchitektur* (Stuttgart: Julius Hoffman, 1927). Source: Staatsbibliothek, Berlin.

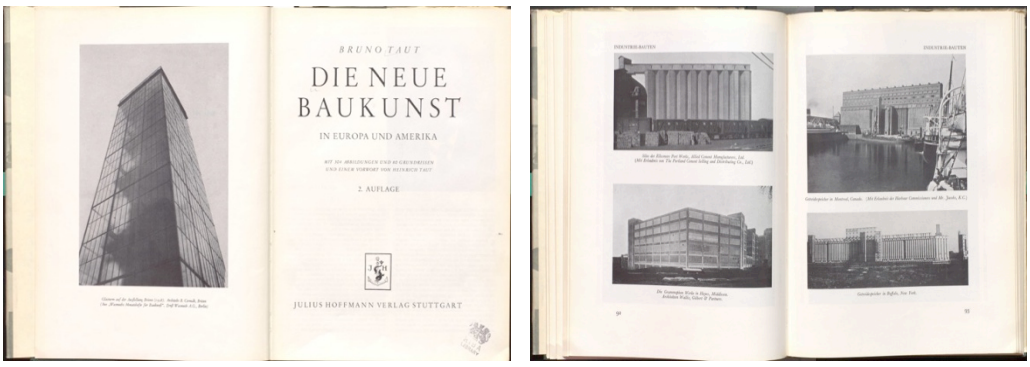


Figure 2.28. Interior spread of Bruno Taut, *Die neue Baukunst in Europa and Amerika* (Stuttgart: Julius Hoffman, 1929). Source: Staatsbibliothek, Berlin.

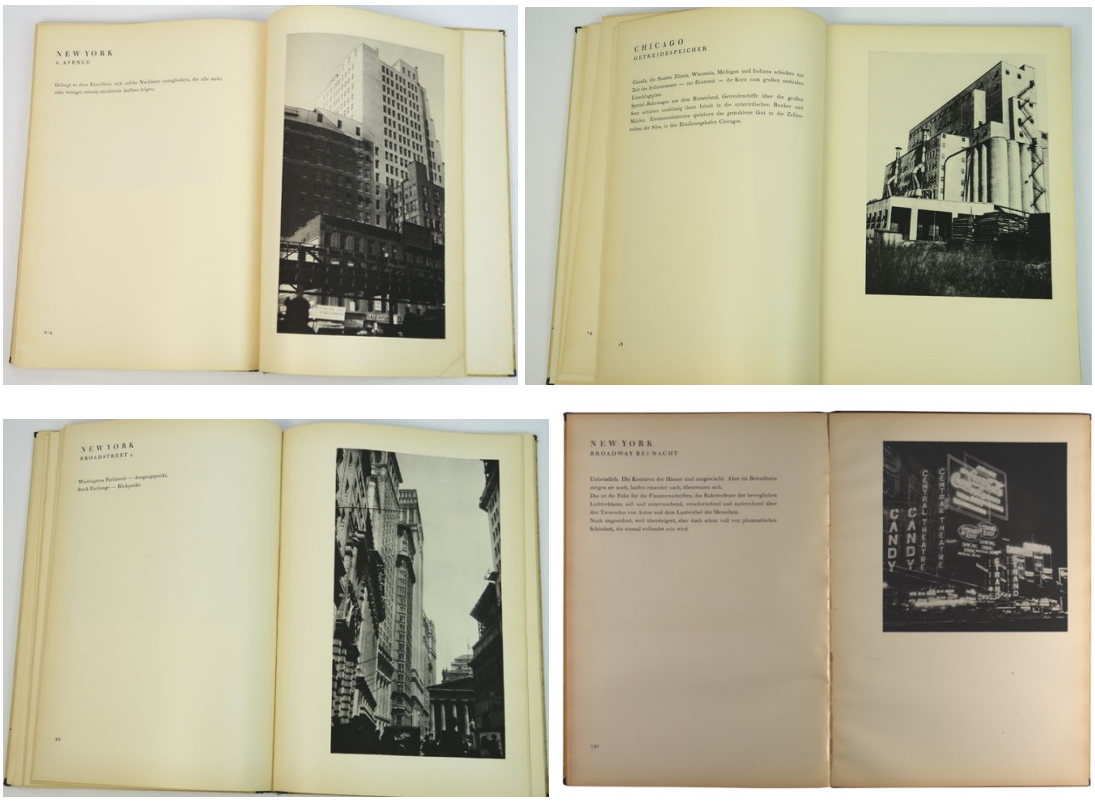


Figure 2.29. Spreads from Erich Mendelsohn, *Amerika, Bilderbuch Eines Architekten.* (Berlin: Rudolf Mosse, 1926). Last image has been accredited to Fritz Lang. Source: Staatsbibliothek, Berlin.

In contrast to other contemporary photobooks such as Ludwig Hilberseimer's *Großstadtarchitektur (Urban Architecture)*[61] (see Figure 2.27) and Bruno Taut's *Die neue Baukunst in Europa and Amerika (The New Architecture in Europe and America)*[62] (see Figure 2.28), what has made this book so influential is the mode in which Mendelsohn presented the material. Taut's and Hilberseimer's books were still structured as journal layouts and made up to some extent with photo-reproductions. Mendelsohn's photographs were not photo-reproductions, nor were they Gropius's selection; rather, they were photographs taken on site and therefore different. As photography historian and architect Rolf Sachsse has argued, Mendelsohn's shots positioned *Amerika* as the 'incunabulum of photographic history … [as] it already contains the full range of Neues Sehen visual language that had to be anticipated only verbally by László Moholy-Nagy

[61] Ludwig Hilberseimer, *Großtadtarchitektur* (Stuttgart: Julius Hoffman, 1927).
[62] Bruno Taut, *Die neue Baukunst in Europa and Amerika* (Stuttgart: Julius Hoffman, 1929).

and Lucia Moholy in their work *Malerei, Fotografie, Film (Painting, Photography, Film)* published that same year.'[63] Mendelsohn's *Amerika* 'illustrated these subjects with a compositional sensibility legible to its European audiences as the formal method of the avant-garde: haphazard juxtaposition, attenuated proportion and asymmetrical placement within the picture frame.'[64] Mendelsohn's photographs of American cities and skyscrapers stimulated the photographic and cinematic use of extreme perspectives, and by doing so they modified the perceptions of the cityscapes of New York, Chicago, Detroit and Buffalo (see Figure 2.29).[65]

Furthermore, Mendelsohn's photobooks are so striking because of the primacy of the photograph, which accords with Michael Jennings's observation regarding Weimar Republic photobooks: 'for the first time arguments were not based on the interplay between image and text, but as photographs alone, arranged in a discursive or polemical order.'[66] For Mendelsohn scholar Michele Stavagna, the photographs are closely connected, as if telling a story with its own dynamics and rhythm.[67]

In Mendelsohn's books, the fact that the images almost stand by themselves as one enlarged image per spread against the almost empty space of the facing page once again places the image as singular. El Lissitzky emphasises this in his review of *Amerika.* One of El Lissitzky's main points when reviewing *Amerika* concerns the importance of the photographs, as they are 'immeasurably more interesting than those photographs and postcards by which we have known America up to now'.[68] By stating this, he was emphasising the importance of the

[63] Rolf Sachsse, *Bild und Bau: Zur Nutzung technischer Medien beim Entwerfen von Architekur* (Braunschweig: Vieweg, 1997), pp. 119–21, cited in Krausse, 'Voyages of Discovery', p. 51.
[64] Jeremy Kargon, 'Critique of an "Artefactual" landscape: Erich Mendelsohn's engagement with the built and the natural environment, 1919–1931', *The Journal of Architecture*, 18.1 (2013), p. 13.
[65] Cohen, *Scenes of the World to Come*, p. 86.
[66] Michael Jennings, 'Agriculture, Industry and the Birth of the Photo-Essay in the Late Weimar Republic', *October* 93 (2000), p. 23.
[67] Stavagna, 'Image and Space'.
[68] El Lissitzky, 'Glaz Arkhitektora', *Stroielnaya promyshlennost (Construction history)*, 2 (1926), translated by Alan Upchurch as El Lissitzky, 'The Architect's Eye', in Christopher Philips (ed.),

architect showing us America 'not from the distance but from within',[69] that is, from direct experience rather than from experience derived from photo-reproductions. Recalling other architects' travel albums, Mendelsohn's 'basic service', according to Lissitzky, was to record points of view with his camera, which as a more modern instrument that is comparable to his eyes 'shows us familiar things in a way that forces us to ponder them more deeply', [70] something characterised by the immediacy and instantaneity of the photographs: 'I was there, I saw it happen, it was like this.'[71] This again makes manifest the distinction between the ordinary documentary 'how to' photography of the engineering journals, and the avant-garde photography of someone like Mendelsohn.

El Lissitzky's interpretation also indicates the ambiguities presented by the book. As Stavagna has noted, while it addressed the classic discussions on European Americanism such as the opposition between civilisation and culture, and old and new world, it also contained Mendelsohn's attempt to express the potentialities of a new architecture within modern cities.[72] Other contemporary photobooks that addressed this dichotomy included Walter Curt Behrendt's *Städtebau und Wohnungswesen in der Vereiningten Staaten (Urban Planning and Housing in the United States)* (1926), Richard Neutra's *Wie baut Amerika? (How does America build?)* (1927) and *Amerika: Die Stilbildung des neuen Bauens in den Vereinigten Staaten (America: The Development of New Style in Buildings in the United States)* (1930). However, and in contrast to Mendelsohn's *Amerika*, in all these cases photographs functioned as illustrations only. A different case is *The United States: The Romantic Era* (1927) by the photographer Emil O. Hoppé. As in Mendelsohn's *Amerika*, photography occupies a primary role. However, due to its documentary nature and lack of narrative, it does not have the effect of

Photography in the Modern Era: European Documents and Critical Writings, 1913–1940 (New York: Metropolitan Museum of Art and Aperture, 1989), p. 221.
[69] El Lissitzky, 'The Architect's Eye', p. 222.
[70] El Lissitzky, 'The Architect's Eye', p. 226.
[71] Wilson Hicks, *Words and Pictures: An Introduction to Photojournalism* (New York: Harper & Brothers, 1952), p. 3.
[72] Reyner Banham, 'Review: *Erich Mendelsohn, Amerika, Bilderbuch Eines Architekten*', *Journal of the Society of Architectural Historians*, 38.3 (1979), p. 300.

closeness prompted by Mendelsohn's vivid accounts and accompanied by the tension with the singularity of the image.[73] Mendelsohn's publication is in this way is distinct.

This moment was characterised by the emergence of the photobook as a genre. While the illustrated journal favoured word and image reportage as a means of constructing a wider context of modernity in Weimar Germany, and of advertising new construction technologies and materials, the photobook 'introduced formal techniques that transformed the metropolis into a laboratory of new sensations, experiences and identities' and turned architecture into an 'object of aesthetic appreciation'.[74] Mendelsohn's case is a telling example. Focusing on the architectural object was something that Gropius had done to some extent when isolating the silo photographs from their initial publication contexts. Yet what the photobook further achieved was to find a form appropriate to the displacement of the valorisation of the single photograph within the context of a book.

2.2.2 The return to the archive – Gropius's failed return

Gropius's interest in North America demanded first-hand experience of the United States. After years of planning and looking for funding – later provided by building contractor Mr Sommerfeld – Gropius, together with his wife Ise, left on 28 March 1928 for New York. Gropius was one of the later modernists to undertake this visit.[75]

In contrast to the *Amerikareise* of Mendelsohn and others that gained a wide public dissemination through the printed press, Gropius's trip was recorded mainly in personal snapshots, glued in several photo albums and housed at the

[73] Stavagna, 'Image and Space'.
[74] Hake, *Topographies of Class*, p. 173.
[75] Reginald Isaacs, *Gropius: An Illustrated Biography of the Creator of the Bauhaus* (New York: Little, Brown, 1991) p. 148.

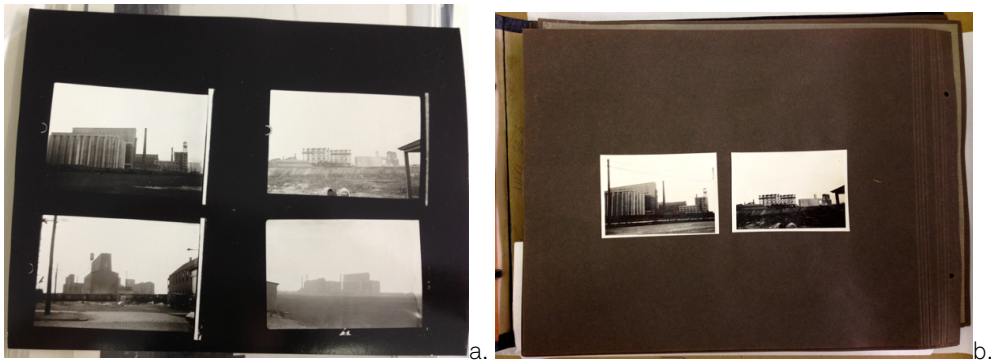
Bauhaus Archiv in Berlin.[76] Only a few of these snapshots, usually shot by Ise Gropius, were purchased by photo agencies. In a similar way to how the nineteenth-century travelogues had recorded through words, Gropius and his wife Ise recorded and documented their voyage mainly through photographic snapshots and as photographic travel accounts. Only a few handwritten notes are recorded in Ise Gropius's travelogue 'Anxiety about America?', which is also housed at the Bauhaus Archiv in Berlin.[77]

After having spent some days in New York, the Gropiuses set off to Washington and Chicago, where they visited Frank Lloyd Wright's family houses. In the foreword to the exhibition and book *Walter Gropius: Amerikareise 1928*, Breuer mentions the Gropiuses visit to the silos as a stop between New York and New Mexico. Their experience, both in New York and New Mexico, seemed more meaningful – this assumption is probably a direct result of the number of images that appear in their photo diary.

Being able to access these snapshots of the Gropiuses' travels brings an altogether different impression from the one derived from the photo-reproductions of silos that had been endlessly disseminated though the printed press. These snapshots are almost thumbnail size, 3 x 5 cm black-and-white, blurred images (see Figure 2.30). It is possible to identify the silhouette of silos in some but not their corporeality. In others, the silos stand closer to the camera lens, and their general silhouette, corporeality and landscape are clear. Yet all images appear with a layer of haze that gives them a distinctive tone. Their lack of sharpness, the doubled subject (as if trying to capture in more than one attempt something that was difficult to apprehend), and the absence of any sort of intensity or clarity defines them and differentiates them from any other photograph of silos that have been considered so far. None of the images are the

[76] Amerika-Reise, 1928. Album 1/3, 2/3, 3/3 Inv. 2000/29 (photo album) Amerika-Reise 1928, Folder Inv. 5407/1-7 (collection of purchased and collected images including a series of silos), Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.
[77] Ise Gropius, 'Angst vor Amerika?', unpublished manuscript, Berlin 1934, Gropius Estate, Bauhaus Archiv, Berlin.

result of experimental viewpoints, such as those introduced by Moholy-Nagy through the *Neues Sehen* (New Vision) or those explored by the *Neue Sachlichkeit* (New Objectivity), which brought together a new understanding of photography and with it a new way of seeing with technology at its centre.[78] Gropius's photographs are instead still, distant, even nostalgic. This is possibly due to the lateness of Gropius's visit. They even resemble the strangeness of the first photo-reproductions that Gropius had used. They invite a rethinking of the familiarity of the photo-reproductions by distorting and unsettling what had been fruitfully constructed as a photographic architectural canon. They reset the image conditions to the origin of the construction of the canon.



a. b.

Figure 2.30. Spreads from Gropius's photo album. (a). Images left above to right below. rf. 1996/21/357/1 (another copy with inv. Nr. 5449/36), 1996/21.184.1, 5449/36, 1996/21.184, 1996/21.187., 5449/28. (b). Inv. Nr. 2000/29.8. Amerikareise-Album 2:S.8. Source: Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.

At the time of Gropius's visit to the US, modern industrial objects and distinctive perceptions of architecture and industrial buildings had an unprecedented acceptance through photography, as seen by two of the best-known examples, Germaine Krull's *Métal* and Sigfried Giedion's *Frankreich, Stahl, Eisen (France, Steel, Iron)*. Yet Gropius's images seem to no longer belong to this discourse. His photographs are snapshots of travel and, as such, they are more 'a confirmation

[78] *Neue Sachlichkeit* or New Objectivity was a movement in German art which emerged in Germany in the 1920s as a challenge to Expressionism. It is characterized by a return to the objective world, as opposed to Expressionism. It is mostly associated with portraiture (George Grosz being one of the most distinctive representatives). With regards to photography the term is used to describe an almost documentary approach where the camera's mechanical ability was used to capture the world in an apparent sharp and objective manner. German artists Albert Renger-Patzsch, Karl Blossfeldt and August Sander are some of the most popular artists and representatives.

[of a presence and a material existence] than of discovery'.[79] Moreover, they can be read as photographs of disillusionment, frustration or even defeat, as they seem unable to capture those significant characteristics that Gropius and others had so enthusiastically praised less than ten years previously.

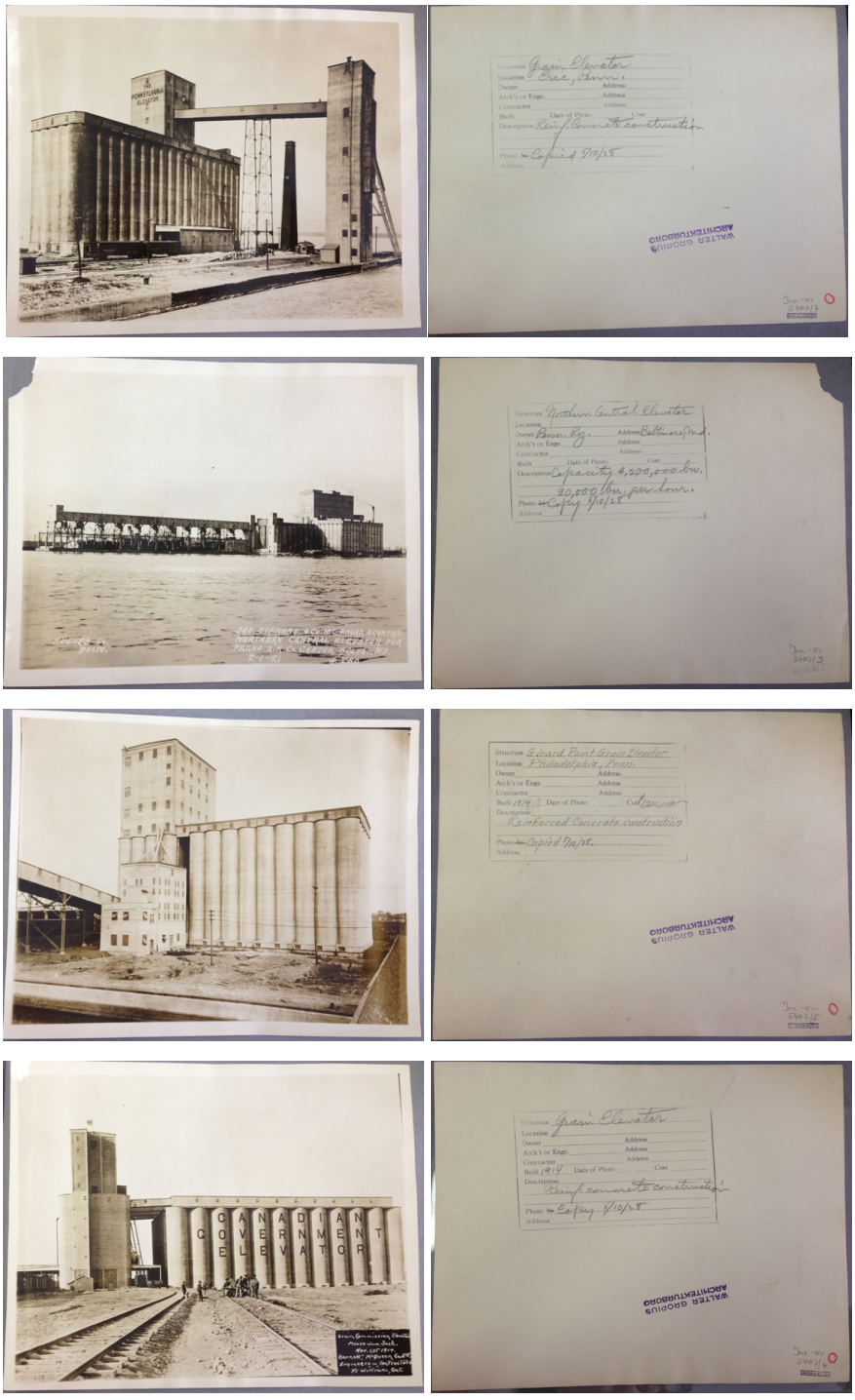


Figure 2.31. Gropius's purchased photo-reproductions. Amerikareise 1928, Inv. Nr. 5407/7, 5407/2, 5407/5, 5407/5. Source: Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.

[79] Osborne, *Traveling Light*, p. 79.

It is interesting to note that within Gropius's archive some of these photographic snapshots appear as enlarged copies and as modern letter-size prints, with a completely different quality and even appearance, in a folder entitled 'Silo Sammlung' ('Silo Collection'). Other sets of purchased modern prints of different silos appear throughout the same folder. The date of purchase for all of them is the same: '5/10/1928'. On most of the stamps on their reverse, the author is crossed out – *Photo ~~by~~* – and instead, overwritten by hand, it reads *Photo ~~by~~ copied* followed by the date. None of these prints have a date of construction or the name of its construction company. Only a few have a geographical location, and all of them have a non-existent or very poor description (see Figure 2.31).[80]

What this means is that once in the US, Gropius replicated the practice that brought the silos to his interest in the first place: he requested and purchased photo-reproductions from a photographic agency. The photographs were again valued as trade objects. Hypothetically, it could be argued that Gropius's acquisition of photo-reproductions was the remedy to the impossibility of reproducing his experience of the first photo-reproductions he ever used, an experience not captured by his 1928 snapshots (though there might also be other unknown reasons). As in 1910, what was striking about the purchased images was their exterior appearance.

Along with these purchased images, some of the remaining images from the 1913 *Jahrbuch* were kept as lantern slides within Gropius's *diaposammlung* (slide collection) housed at the Bauhaus Archiv Berlin. This collection enables his method of collection of photographs to be traced. The collection includes photographs not only of American silos but also of factories and exemplary buildings within Germany and abroad, of the Bauhaus buildings, works and curriculum, of work within his own office in Germany and abroad, and of outstanding technical developments within architecture and engineering.[81] This

[80] Inv Nrs: 5407/01 – 7. Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.
[81] Remaining lantern slides from silos held within Gropius Slide Collection: Inv. 2000/12.472a, 12.471a, 12.460 (from Franz Stoedtner), 12.457a, 12.456a, 12.455a, 12.454a, Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.

collection, which holds lantern slides whose acquisition dates are from the 1910s until the late 1950s, is the material evidence that the great majority of photographs used by Gropius, and that were not part of his own work or of the Bauhaus, came from advertising brochures, publications and commercial image sources, Stoedtner's being the most prominent.[82]

2.3 Silos as individual objects, and objects of economic trade

Gropius's collection testifies to the photographic practices and economies that shaped the initial dissemination of the silos and determined the way they were consumed within architectural culture. Ironically, the poor quality of the photo-reproductions that Gropius first used – the 'grain of the image' (as Hadas Steiner defined the quality of the silos[83]) – determined the economies of trade that defined the form and malleability of the photographic images in its inception: as isolated buildings but also as commodities. Furthermore, this is also a product of the tension between architectural consumption and architectural commerce that arguably still shapes architectural photography today. In *Photographic Architecture in the Twentieth Century* (2014), Claire Zimmerman addresses the underlying historical tension between buildings and their photographic reproduction in the early twentieth century. As the cases of both Gropius and (as will be seen) Mies demonstrate, the commercial power of photography increasingly helped architects to disseminate their work (whether a built work or a photographic work as in case of Lázsló Moholy-Nagy) in all sorts of printed media, including journals, magazines, and monographs.[84] However, for Zimmerman this 'through-line' connection between the experimental avant-

[82] Kartei seiner Diasammlung (704 Karteikarten, 1237 Glasdias 8.5x10 cm) Inv. Nr. 2000/12.1-1237 Walter Gropius Nachlaß, Bauhaus Archiv, Berlin.
[83] Hadas Steiner. 'The Grain of the Image'. In Miriam Paeslack (ed.), *Ineffably Urban: Imaging Buffalo* (pp. 117-27). Farnham: Ashgate, 2013.

[84] Banham, *Concrete Atlantis*; Colomina, *Privacy and Publicity*; Cohen, *Scenes of the World to Come*.

gardism and the architectural market not only meant that architects could benefit from the experimental approaches that were shown in exhibitions such as 'Film und Foto' in 1929, but also that 'there was a recurrent tension between the potential of photographic media for new architectural ideas and the burden of representation placed upon the architectural photograph'.[85]

The tension between architecture and photography was also felt between commercial and avant-garde practices. Zimmerman frames the relationship between commerce, trade and architectural photography thus: 'Architectural photography regulated architectural commerce in late industrial society, having consequential effects on the reception and production of new architecture and channelling discourse in particular directions.'[86] However, Zimmerman's argument should not be read in this one direction only. Architectural photography regulated trade in architectural photographs and vice versa; trade in images popularised certain kinds of photographs in a way that encouraged their replication, as this chapter has demonstrated. Furthermore, Sachsse discusses a photographic German convention, older than the Bauhaus or the 1920s International Style, that defined a language particular to Germany in relation to the photographic representation of objects, the industrialisation of photographic practices, and trade.[87] This is one example of how trade and photographic practices were inextricably linked and informed one another. Yet a clearer example within the art and architectural realm of how commerce shaped architecture and vice versa is that of Franz Stoedtner's photo agency. As discussed above, the construction of this commercial photographic library helped crystallise photographic modes that architecture had to comply with and make use of.[88]

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[85] Zimmerman, *Photographic Architecture*, p. 54
[86] Zimmerman, *Photographic Architecture*, p. 7.
[87] Sachsse, 'Made in Germany'.
[88] Other sources that address this relationship, though not specifically in Germany, are Anne McCauley's *Industrial Madness* (1994), which deals with the economics behind photographic practices in nineteenth-century Paris, focusing on the career of Charles Aubry. On the place of photography within wider visual economies, Stephen Bann's *Parallel Lines* (2001) and *Distinguished Images* (2013) deal with the practice of photography within nineteenth-century economies.

The silos were appropriated from commercial engineering journals, isolated as singular images, and turned into an item in a selling list (as in Stoedtner's trade catalogues) as individual objects of economic trade, and they were consumed in different ways: as exhibition objects, as lectures, as journals, and as photobooks. At the same time, this informed the way in which the silos were absorbed and consumed: as singular architectural objects whose formal appearance takes priority over their process and/or use. It determined the freedom of using and altering them (as in Corbusier's case) and enabled their migration from journal to exhibition, to lecture, to book and to different audiences for each dissemination platform. However, in contrast to the German Pavilion (as will be discussed below), the silos are independent of authorship.

Their material iterations determined their mode of transaction. Grainy images, with no named photographer and with engineer effaced, the photo-reproductions had a freedom of migration and mobilisation that went hand in hand with capitalist modes of production, distribution and consumption. Even the photographs of travel by Mendelsohn and Gropius are photographs that express their own time: the time of capitalist expansion and the construction of an architectural identity based on the possibility of travel. These photographs of travel emphasise the material and built representations of the emerging capitalism, with the silos – one of capitalism's pre-eminent forms – as their subject matter. Photography was not only a representational tool in shaping these processes, as Osborne has argued, but was also the product of an economic culture of trade and, therefore, a commodity in its own right.[89] The accessibility of cameras and the falling prices of films and prints increased their consumption and determined that photography was the most 'appropriate' means of representation of experiences.

The characteristic of this commodification was the infinite reproducibility and, therefore, repetition of these images. This is precisely the condition identified by

[89] Osborne, *Travelling light*, p. 9.

Allan Sekula when revisiting the conflicting duality between the photographic object and its economies of trade.[90] Sekula critiques the bond between capitalism and representations of material culture, photography being the fundamental one. He proposes a materialist social history of photographs as an attempt to understand the social character of what he calls 'the traffic in photographs' that

> taken literally, involves the social production, circulation and reception of photographs in a society based on commodity production and exchange. Taken metaphorically, the notion of traffic suggests the peculiar way in which photographic meaning – and the very discourse of photography – is characterised by an incessant oscillation between what Lukàcs termed the 'antinomies of bourgeois thought.' This is always a movement between objectivism and subjectivism.[91]

Though my aim has not been to focus on the metaphoric reading of 'traffic' but to underline the 'literal', Sekula's argument is relevant here, as it indicates a dual reading of photographs – and of photography – so far overlooked within the history of the photographs of the silos and the Pavilion. While their meaning and multiple interpretations have revolved around what Sekula describes as the 'ghosts' of bourgeois science, bourgeois art, owned objects and reconstructed subjects, they have rarely been framed within the interplay of economic, technological and material considerations. Drawing upon Benjamin, the materiality of the photographic images and their materialisations act as witnesses because they can physically demonstrate the operation of commodity fetishism that they have been subjected to.

More importantly, Sekula's first essays derive from published images rather than archival ones; in Sekula's words, they are 'museologically preserved specimens'.[92] This informed Sekula's understanding about the degree to which photographic meaning was dependent on the context of publication and of

[90] The work of Victor Burgin, Steve Edwards, Molly Nesbit, Martha Rosler, Abigail Solomon-Godeau, Sally Stein and John Tagg also address this issue.
[91] Allan Sekula, 'Introduction', in *Photography Against the Grain: Essays and Photo Works 1973–1983* (Halifax, NS: Press of the Nova Scotia College of Art and Design, 1984), p. xv.
[92] Sekula, 'Introduction', p. xii.

reception – a method of interpretation that seems to be commonplace when working with photographs, yet is displaced from the beginning for the silos where the publication context was completely obliterated. The history of the silos in architecture started with their 'afterlife', in Benjamin's terms. In his essay on Eduard Fuchs, Benjamin amplifies the concept of the afterlife:

> For a dialectical historian, these works incorporate both their pre-history and their after-history – and after-history in virtue of which their pre-history, too, can be seen to undergo constant change. They teach him how their function can outlast their creator, can leave his intentions behind.[93]

For architecture, and particularly in the case of the silos, the concept of afterlife is useful as it demonstrates how their removal from their original publication context and their appropriation into the architectural one through trade, exchange and practices of re-photographing on site 'shifts critical attention away from the "context" and intention of the architect and the moment of creation and toward the translations of use and interpretation that occur over time.'[94]

By investigating the series of mobilisations and migrations that the photographic reproductions of the silos were subjected to, this chapter has demonstrated that these mobilisations and migrations normalised the image's mode of representation based on modes of consumption. While the mobilisation of the image illustrates distinct modes of consumption, and thus enables and consolidates the repeated appearance of the silo's photo-reproductions in the early twentieth century in architecture, it is interesting to realise that they overlook the subject portrayed, which, as the economies of trade that characterise these images, is also the product of the emergent capitalism. This characterisation of the history of the construction and consolidation of the photographic canon of the silos entails, as Mary Kelly argues 'a marginalisation

[93] Walter Benjamin, 'Eduard Fuchs, Collector and Historian', in Benjamin, *One Way Street and Other Writings*, trans. Edmund Jephcott and Kingsley Shorter (London: NLB, 1979), p. 351.
[94] Patricia A. Morton, 'The afterlife of buildings: Architecture and Walter Benjamin's theory of history', in Dana Arnold, Elvan Altan Ergut and Belgin Turan Ozkaya (eds), *Rethinking Architectural Historiography* (London: Routledge, 2006), p. 220.

of alternative practices and discourses'.[95] The following chapters will elucidate on two moments in the history of the silos in which a set of alternative images – not those printed – propose alternative materialisations, practices and discourses.

[95] Mary Kelly, 'Re-viewing modernist criticism', in Brian Wallis (ed.), *Art After Modernism: Rethinking Representation* (New York: New Museum of Contemporary Art in association with David R. Godine, [1984] 1995), p. 97.

3

Lichtbildervortrag



Figure 3.1. Walter Gropius, speaker. Walter Dexel, designer. 'Homes and appliances of Modern People: A lecture with slides', 1925.

'Monumentale Kunst und Industriebau, Vortrag mit Lichtbildern [lecture with light-images] by Walter Gropius, 8pm, 1 Mark, Folkwang Museum, Hagen, 1911', announced the poster. In a poster similar to this one (see Figure 3.1), the Folkwang Museum in Hagen promoted Walter Gropius as lecturer, the content of his lecture – the rigorous study of the purpose and design of contemporary industrial buildings – and the media of the lecture itself: light-images. It was one

of the many performances that, through spoken voice and projected photographs, responded to the museum's dissemination and educational purposes. This was when Gropius projected nine silos for the first time, as the last of a series of 69 examples – or 'illustrations' in his words – of exemplary industrial architecture, following a one-hour rhetorical argument concerning what he proposed to be the 'new monumental style'. This was Gropius's first ever public lecture, and, unwittingly, the first ever public dissemination of a series of photographs of North and South American silos (among other known and unknown structures and buildings) within architectural discourse.[1]

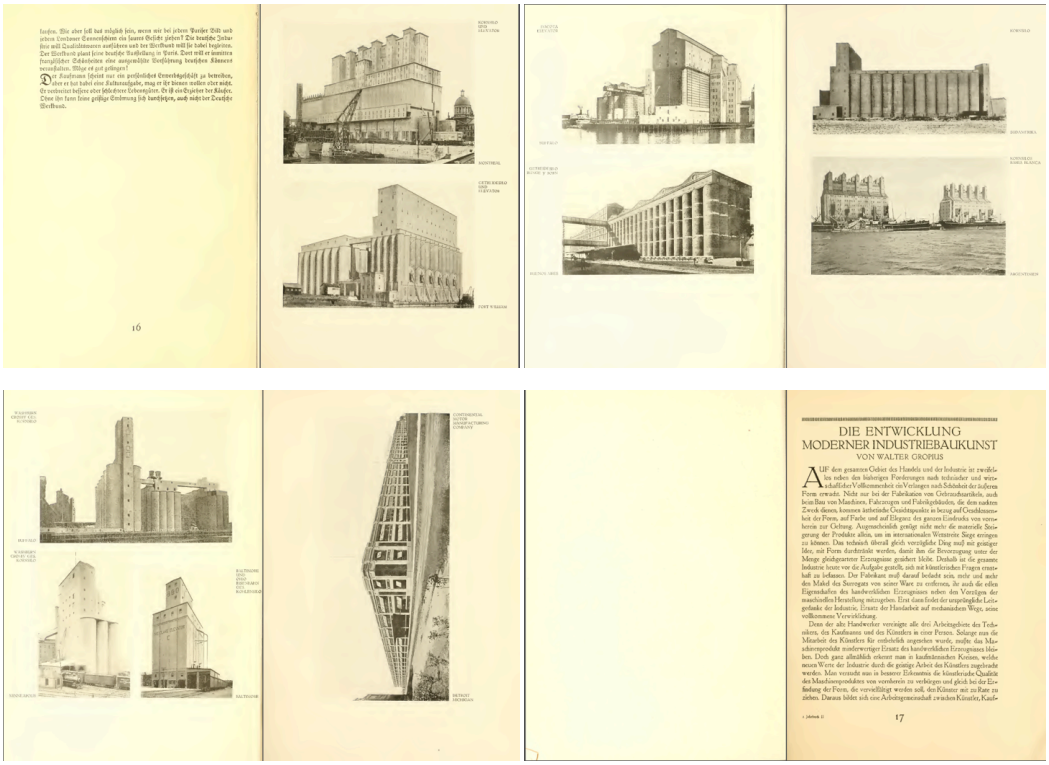
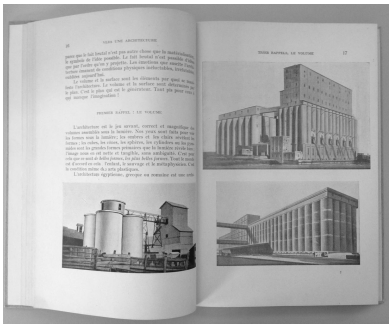
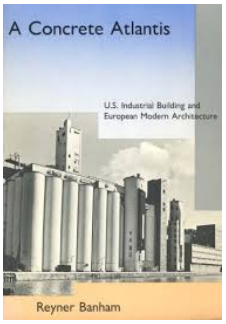


Figure 3.2. Layout of the 1913 German *Werkbund's Yearbook* where Gropius inserted the traded photographs of the silos as 'illustrations' of his 'Development of Modern Industrial Architecture' article. Source: https://archive.org/details/jahrbcher1913deutuoft (accessed 2 July 2018).

[1] Archival evidence in the Gropius Nachlaß at the Bauhaus Archiv in Berlin demonstrates that it was in the form of a lecture and through projection that Gropius introduced photographs of these industrial – and until then anonymous – engineering structures into architectural discourse for the first time, contradicting other accounts that point at the 1913 *Werkbund Jahrbuch* instead.

Two years after Gropius's lecture, a selection of these images were published in the German Werkbund's 1913 yearbook as a photographic insert detached from the text; they were separate 'illustrations' to Gropius's article on the 'Development of Modern Industrial Architecture'.[2] As explained in Chapter Two, this publication, together with the Werkbund exhibitions *Moderne Baukunst* and *Industriebautenausstellung* (1911–1913), is usually discussed (by, for example, scholars such as A.M. Jaeggi and J.L. Cohen) as the original site of Gropius's first reflections on industrial architecture and as the first public dissemination of the North American silos. It was this printed and public condition that determined their iconic and paradigmatic status. This status would be perpetuated by their repeated publication and interpretation thereafter, in different layouts and by, for example, architects such as Le Corbusier in 1923 and Bruno Taut in 1929 – and, once the canon had been consolidated years later, by the Canadian artist and architect Melvin Charney in 1967 and the British architectural historian Peter Reyner Banham in 1986, among many others (see Figures 3.2–3.4).





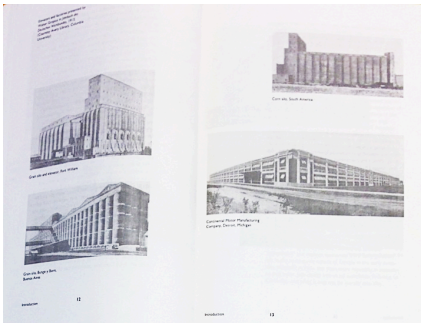


Figure 3.3. Layout of the first edition of *Vers une architecture* 1923 by Le Corbusier-Saugnier, where the images that Gropius used in 1913 appear reproduced, although the silo below appears already retouched. One more silo (lower left) is reproduced, whose source is more likely to be Dr Franz Stoedtner. Source: Fondation Le Corbusier.
Figure 3.4. Layout of Reyner Banham's 1986 book *A Concrete Atlantis* in which Banham reproduced some of Gropius's 1913 photo-reproductions using Corbusier's layout. Source: author.

This chapter acknowledges the lecture as the first public dissemination platform of the silos and asks how the lecture's format contributed to their understanding

[2] Walter Gropius, 'Die Entwicklung Moderner Industriebaukunst', in *Die Kunst in Industrie und Handel: Jahrbuch des Deutschen Werkbundes 1913* (Jena: Verlegt bei eugen Diederichs, 1913).

and consolidation as one of the most studied modern canons. It explores Gropius's use of *Lichtbilder* – light-images or glass slides – to question possible ways in which their agency as lantern slides contributed to the argument that Gropius was publicising, for the first time, on that evening in 1911. The original lecture manuscript indicates that images and text were merged in the performance (in contrast to their presentation in the yearbook). Thus, this chapter will also explore how the agency of the projector, the temporality of the performance, the spatialisation of the images, the voice of the lecturer, and the nature of the *Lichtbild* entwined to enable a distinct and unique criticism – a mode of criticism that takes place through the ephemeral space of the projection, rather than in the various printed media where it is most often encountered.

In order to visualise and understand how these ephemeral conditions come together, I will attempt to reconstruct what happened on the evening of 1911 based on the lecture's manuscript and the available *Lichtbilder* housed at the Bauhaus Archiv in Berlin. I will do this through staged projections that will re-enact the projections of the photo-reproductions Gropius used on that evening, as well as through a series of inserted written excerpts that aim to recreate the atmosphere and lecture performance and to textually represent what the staged projections achieve. Doing so allows me to experiment with the possibilities of architectural description and reproduction. This is propositional as it addresses different forms of encountering, experiencing and imagining how the material was used, and it enables speculation about what happened in the lecture hall to inform my research. As in other chapters, re-enactment is a way of animating material otherwise kept hermetic in an archival box.

For this re-staging, I initially contextualised the space in which the lecture took place through double projection. I projected some of the early twentieth-century photographs of the Folkwang Museum in Hagen side to side with photographs of

Peter Behrens' lecture hall where the lecture was delivered.[3] This proved useful in understanding the underlying political and social conditions in which the lecture took place, and how that informed Gropius's argumentation. But it also helped to visualise the space and the time in which the photographs initially emerged and were performed as spatialised experiences. Furthermore, I projected some of the photographs that were part of the lecture to visualise their dematerialisation through light and shadow, and their realisation in the space of the room. As a result, I could see and experience the enlarged version of a 3x3 centimetre lantern slide, and to realise how the dematerialisation of the image into shadow and light through projection augmented Gropius's argument. The projected photograph materialised Gropius's criticism; it staged a mode of 'photographic criticism'.

Later, and as a response to the limitations imposed by the format of a doctoral thesis, these projections and performance were transformed into sections of fictional writing embedded within the text of the chapter, this time through a combination of words that takes the reader through the photographs, and of photographs that not only accompany those words but are the subject matter of those narrations.[4] The chapter has two of these textual insertions. The first acts as the introduction to the general atmosphere of the lecture contained in the distinct lecture hall of the Folkwang Museum in Hagen. The second offers a textual reconstruction of the moment in which the silos appeared projected as a means to present the agency of the image alongside the spoken words and within the space of the lecture hall. Both cases draw upon and are an interpretation derived from Gropius's lecture manuscript held at the Bauhaus Archiv in Berlin. The purpose of introducing them as textual excerpts – more closely related to a script – is to attempt a reading of an event as the lecture was: time-based and

[3] The source of these images is the Bild Archiv Foto Marburg. See: www.fotomarburg.de.
[4] The use of fiction as a means of research and writing architecture has been explored by, among others, Emma Cheatle in *Part-Architecture: The Maison de Verre, Duchamp, Domesticity and Desire in 1930s Paris* (London: Routledge, 2016); Hélène Frichot, 'Following Hélène Cixous Steps Towards Writing Architecture', *Architectural Theory Review*, 15.3 (2010), pp. 312–23; and Jane Rendell, 'Site-Writing: She is Walking about in a Town Which She Does Not Know', *Home Cultures*, 4.2 (2007), pp. 177–79.

supported by specific visual technology in a given location, as distinct from other forms of presentation modalities such as publication.

3.1 The lecture hall and the lecture's structure

The lecture hall where Gropius presented his lecture was a special room within the Folkwang Museum in Hagen (see Figure 3.5). Designed by the Berlin-based architect Peter Behrens in 1905, it differentiated itself from the museum's art nouveau interior, previously commissioned to the Belgian architect Henry van der Velde, as well as from the building's neo-gothic exterior designed by the architect Carl Gerard (who was also Berlin-based).

Behrens's lecture hall was significant for the museum. It was the space where a series of lectures on art history and social reform were offered to the public as part of the museum's open agenda of exhibitions, installations, and theatre and music performances, as well as of avant-garde dance. It was the result of Osthaus's conviction that the Folkwang should act as a form of aesthetic education for local factory owners, workers and consumers; in his words, a 'Total work of Art for all'.[5]



Figure 3.5. On the left, the Lecture Hall by Peter Behrens, 1905. Centre and right, interiors by architect Henry Van der Velde, 1902. Right, Exterior by architect Carl Gerard, 1902. Folkwang Museum, Hagen. Source: Bildarchiv FotoMarburg, https://www.bildindex.de/ete?action=queryupdate&desc=folkwang%20hagen&index=obj-all (accessed 2 July 2018).

[5] Katherine Kuenzli, 'The Birth of the Modernist Art Museum: The Folkwang as Gesamtkunstwerk', *Journal of the Society of Architectural Historians*, 72.4 (2013), pp. 503–29.

[excerpt 1 starts here]



Before the start of the lecture, approximately twenty-four attendees took their seat in the semi-circular wooden stall designed by the German sculptor Rudolf Bosselt. The lecturer's podium stood on the right. On a table in the centre there were a Leica sciopticon and a wooden box with sixty-nine glass slides waiting to be projected onto the rectangular canvas-like fabric that stood in a dismountable wooden frame on the left, facing the audience.



Under the dim light of the chandelier and in the warmth of the open fire chimney, Karl Ernst Osthaus introduced his invited lecturer Walter Gropius, a promising young architect who, together with his office partner Adolf Meyer, was then working for Karl Benscheidt on his Fagus Factory complex project. Gropius was interested in the rigorous study and design of industrial buildings and, together with Benscheidt, had recently visited various industrial complexes in the neighbouring Ruhr area. The lecture, Osthaus clarified, would therefore enlighten the audience with a series of exemplary building structures that would represent the unity between industrial architecture and monumental art as well as the contemporary discussions around the question of 'style',

as a quest for unity between form and the spiritual imperative of the time.[6]



Before finishing, Osthaus mentioned Gropius's recent decision to join the Werkbund, and to therefore work towards further projects and collaborations, the first of which would be the traveling exhibitions of photographs *Moderne Baukunst and Industriebautenausstellung* organised with the Museum für Kunst in Handel und Gewerbe (German Museum for Art in Trade and Production). The exhibitions (more the former than the latter), like the lecture, would address the significance of the production of industrial building. Gropius will illustrate these arguments through photographic accounts drawn from his collection of photographic reproductions, clippings, and glass slides that he had assembled since his time in Peter Behrens's office. As a valuable collection, they had also recently joined the collection of the Folkwang's Diapositivzentrale ('slide central') that the art historian and commercial photographer and entrepreneur Dr Franz Stoedtner is working to establish.

Figure 3.6. Bilddatei-Nr. Fm618890.
Figure 3.7. Bilddatei-Nr. Fm615229.
Figure 3.8. Bilddatei-Nr fm1064583. Folkwang Museum, Hagen. Source: Bildarchiv FotoMarburg. https://www.bildindex.de/document/obj20142317?part=13 (accessed 2 July 2018).

[6] See Frederic J. Schwartz, *The Werkbund: Design Theory and Mass Culture before the First World War* (New Haven, CT, and London: Yale University Press, 1996), pp. 18–26.

It is worth emphasising that only the original manuscript and a few *Lichtbilder* from the lecture remain in Gropius's archive (see Figures 3.9 and 3.10), some as actual *Lichtbilder*, some as index cards of *Lichtbilder* that no longer exist (see Figure 3.9). The original and complete manuscript has never been published as such, thus limiting our interpretation of the lecture's content and form.[7] In 1961 Helmut Weber published extracts of the lecture. When published in 1983 by Karin Wilhelm as part of her monograph *Walter Gropius Industriearchitekt*,[8] the second part of the lecture was obliterated: no images, no 'illustrations' accompanied the text, thus emphasising only the initial rhetorical part, and, possibly, reflecting a view that the images were unnecessary. Furthermore, when it was entirely transcribed for the first time in printed media in 1985 by Weimar scholars Schädlich and Probst, the hierarchy of words and images was completely altered.[9] In these three cases, the lecture appears as a document to be read and not as a script to be performed. Photographs appear as illustrations and not as arguments, and words and images appear printed side by side on the page and not as verbal and visual arguments merged in performance. In contrast to scholars like Banham who have focused only on the initial (rhetorical) part, this chapter will instead stress the importance of considering the lecture as an ephemeral event composed of both read and projected excerpts as well as of verbal and visual representations.

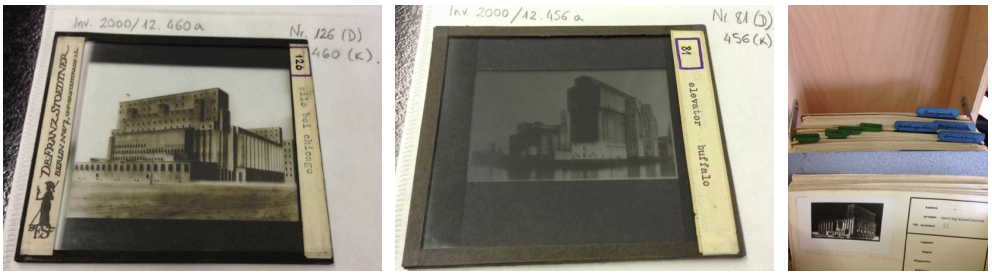


Figure 3.9. *Lichtbilder* from Walter Gropius, *Diaposammlung*. Index cards of *Lichtbilder*, in this case showing the Dakota elevator file of the *Lichtbild* that Gropius projected in 1911. Source: Walter Gropius Nachlaß Bauhaus Archiv Berlin.

[7] See Annex 1 for a translation of the complete manuscript by Tilo Amhoff.
[8] Karin Wilhelm, *Walter Gropius, Industriearchitekt* (Braunschweig: F. Vieweg, 1983).
[9] Hartmut Probst and Christian Schädlich, *Walter Gropius* (Berlin: Verlag für Bauwesen, 1985–1987).

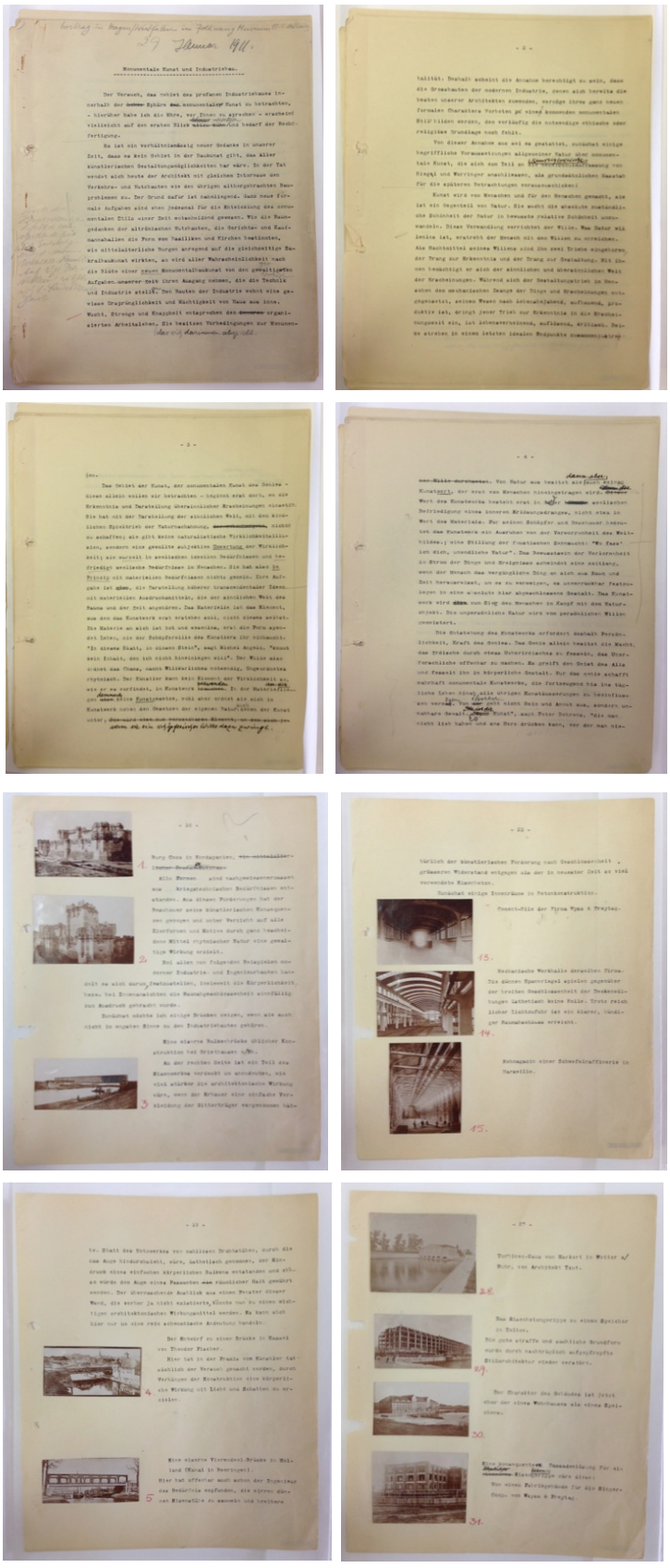


Figure 3.10. Sample pages. Walter Gropius ‘Monumentale Kunst und Industriebau’ (Machinenmanuskript, 37, S). Source: Walter Gropius Nachlaß, Bauhaus Archiv Berlin.

The manuscript (see Figure 3.10) suggests that Gropius's lecture was divided into two parts. While the first part consisted of seventeen imageless typewritten pages to be read, the second comprised a series of 69 images and their corresponding 'captions' that, as 'illustrations' of Gropius's argument, were also meant to be read, only this time along with the succession of images that, one after the other, were projected onto the screen.

At the same time, as the title of the lecture suggests, its overall content was itself divided into two subsections: one 'On Monumental Art' and another 'On Industrial Buildings'. While 'On Industrial Buildings' established a relationship between industrial architecture and production by touching upon the changes that were required in reforming and enhancing the social performance of factory design and architecture, this chapter will concentrate on the second subsection 'On Monumental Art'. The section that framed the discussion of industrial buildings as precursors of a coming 'new monumental style' and a 'new building art' had been, in Gropius's words, 'lacking [so far] necessary ethical or religious foundation'.[10] This section is worth considering, because it has been effaced from the lecture's historiography, and also because it is the moment in which the lecture's mode shifts from the purely oral to the oral-and-projected.

3.2 Empathy theory

'Let me venture, straight away, to put forward a few fundamental positions of a general nature on monumental art, related in part to the new art historical perceptions of A. Riegl and W. Worringer, as basis for later considerations',[11] Gropius read while appealing for monumentality as a necessary precondition of the 'new industrial building's monumental art'. By drawing upon art historians

[10] Walter Gropius, 'Monumentale Kunst und Industriebau' (1911), unpublished lecture Manuscript. Translated by Tilo Amhoff. Walter Gropius Nachlaß, Bauhaus Archiv Berlin.
[11] Translated by Reyner Banham from the extracts published in *Walter Gropius und das Fagus Werk* by Helmut Weber (1961) and revised in light of the full text published by Wilhelm in *Walter Gropius Industriearchitekt*, p. 116. See Reyner Banham, *A Concrete Atlantis: US Industrial Building and European Modern Architecture 1900–1925* (Cambridge, MA: MIT Press, 1986), p 197.

Riegl and Worringer, Gropius justified his quest for monumentality through an appeal to empathy theory.[12] This would entail abstracting and psychologising historical styles into simple, massive and geometric forms capable of evoking powerful emotions that, in Gropius's words, 'mak[e] ALL shiver, which through [their] sheer size overwhelm us mentally.'[13]

Through empathy, Gropius offered a possibility of extending horizons beyond the narrow audience of the bourgeois architectural profession and the social class to which it belonged. According to this theory, and analogously to Osthaus's conception of the Folkwang Museum, even the lower middle and working-class audiences were within reach.[14] Furthermore, Gropius's appeal for monumentality as a necessary precondition of the 'new industrial building's monumental art' was inextricably linked with his reading of Kunstwollen[15] ('artistic volition') as a replacement for 'style', which, in its formalist definition, asserts that art or visual production is the perfect and unmediated expression of this said volition.[16]

With this theoretical approach, and using 'everyday' structures and buildings as illustrations for his claim, Gropius overtly aimed to transgress the question of 'style' as a discourse of historical precedents within the German context before reunification; Moreover, this implied confronting a discourse so far indivisible from the emergence of the German bourgeoisie that, as a political force, had

[12] See Gropius, 'Monumentale Kunst und Industriebau', p. 2. The work cited is probably *Wilhelm Worringer, Abstraktion und Einfühlung. Ein Beitrag zur Stilpsychologie. Inaugural-Dissertation zur Erlangung der Doktorwürde der Philosophischen Fakultät der Universität Bern vorgelegt von Wilhelm Robert Worringer aus Köln am Rhein. Neuwied: Heuser'sche Verlags-Druckerei 1907*, later republished in 1908 as *Wilhelm Worringer, Abstraktion und Einfühlung. Ein Beitrag zur Stilpsychologie* (Munich: R. Piper & Co., 1908). In this work, Worringer refers to Alois Riegl as one of his primary sources.
[13] Translation in Banham, *Concrete Atlantis*, p. 197.
[14] Kathleen James-Chakraborty, *German Architecture for a Mass Audience* (London: Routledge, 2000), p. 3.
[15] This concept was initially adumbrated in Alois Riegl, *Stilfragen: Grundlegungen zu einer Geschichte der Ornamentik* (Berlin: Siemens, 1893) and investigated in Riegl, *Die spätrömische Kunst-Industrie* (Vienna: Druck und Verlag der Kaiserlich-Königlichen hof-und Staatsdruckerei, 1901). For a wider discussion, Alina Payne, 'Beyond Kunstwollen', in Alois Riegl, *The Origins of Baroque Art in Rome* (Los Angeles: Getty Research Institute, 2010), pp. 1–33. For further discussion of the term, see, among others, Erwin Panofsky 'The Concept of Artistic Volition', translated by Kennet J. Northcott and Joel Snyder, *Critical Inquiry* 8.1 (1981), p. 17.
[16] Schwartz, *The Werkbund*, p. 21.

made it relevant for a relatively elite audience that could decode its references to architectural history and classical and other iconography.[17]

Projected images also performed as a more democratic means of dissemination that were accessible by those who had no access to specialised publications and contemporary discourses. The lecture, its form and its content, as well as the Folkwang as its dissemination platform, reinforce what Kathleen James-Chakraborty has argued through reference to the construction of public buildings: that the transformations experienced by German architecture between 1910 and 1940 were closely related to the fact that, on the one hand, they resulted from efforts to reach a larger public and, on the other, to generate universal empathic responses: 'They replaced allusions comprehensible only to those trained to decipher them with spectacle they believed accessible to all.'[18]

3.3 'Corporeality'

In his lecture, Gropius appealed for monumentality as a necessary precondition of what he then termed as the 'new industrial building's monumental art'. His first definition of monumentality can be traced in the lecture's manuscript: it is a 'building art' that requires 'specific tasks' that will determine the 'development of the new monumental style of the time'.[19] As noted above, monumentality was also inextricably linked with Gropius's reading of Kunstwollen ('artistic volition'). As Gropius announced in his lecture, this 'new blossom of a *new* monumental building art will begin from the huge tasks that technology and industry of today demand'.[20] Accordingly, 'utility, purposiveness and social performance' were preconditions for what Gropius designated as the 'new monumental style', but also of what he proposed as the 'monumental art' which, he continued, partially

[17] James-Chakraborty, *German Architecture*, p. 3.
[18] James-Chakraborty, *German Architecture*, p. 3.
[19] Gropius, 'Monumentale Kunst und Industriebau', p. 1.
[20] Gropius, 'Monumentale Kunst und Industriebau', p. 1.

followed empathy theory as initially formulated by art historians Riegl and Worringer.

Within this context, one notion appears as a mandatory prerequisite for industrial building as the 'new monumental art'. This is Gropius's use of 'corporeality' (*Körperlichkeit*[21]), a term whose discourses, according to the late nineteenth-century German aesthetic and art history, are rooted in the discussions between form and content, structure and ornament, art and technology, style and eclecticism. Moreover, *Körperlichkeit* is a term that implies a distinction between materiality and immateriality, mass and lightness, as well as between iron and ferroconcrete, as Siegfried Giedion later argued using his own now-iconic photograph of the transporter bridge in Marseille to justify his preference for iron.[22] It is in the inclusion of this term that Gropius's central argument lies, but more importantly this is where the inclusion of the silos in the 1911 lecture finds its justification and where the projection of images finds its validation.

I emphasise this particular term because, as well as Gropius's placing of corporeality in direct relation with the built form, there was also at the event a second corporeality: the corporeality of the image, a corporeality inextricably linked with and only achievable through the use of the *Lichtbilder* projection. While the former is a condition of Gropius's 'new monumental art', the latter made it possible to materialise Gropius's idea of corporeality in front of the audience's own eyes.

[21] Referred to by Gropius in 'Monumentale Kunst und Industriebau', pp. 7, 10. For a wider discussion, see August Schmarsow, *Das Wesen der architektonischen Schöpfung* (Leipzig: Karl W. Hiersemann, 1894); and Heirich Wölfflin, *Proglegomena zu einer Psychologie der Architektur*, inaugural dissertation of the philosophy faculty at the University of Munich (Munich: Kgl. Hof- & Universitäts-Buckdrukerei, 1886), reprinted and translated in Francis Mallgrave and Eleftherios Ikonomou (eds), *Empathy, Form and Space: Problems in German Aesthetics 1873–1893* (Santa Monica, CA: Getty Research Institute, 1994).
[22] Sigfried Giedion, *Bauen in Frankreich, Eisen, Eisenbeton* (Leipzig and Berlin: Klinkhardt & Biermann, 1928), translated as *Building in France, Building in Iron, Building in Ferro-concrete* (Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1995).

3.3.1 Gropius's notion of corporeality

Gropius's concept of corporeality and its imperative relation to monumentality is based on nineteenth-century theoretical debates that introduced the significance of the corporeal into, on the one hand, architecture and, on the other, the discussion on the perceptual characteristics of mass and the hesitancy of iron as a medium of architectural expression. In this discussion, the German archaeologist Karl Bötticher's *Die Tektonik der Hellenen (Greek Tectonics)*, a book published in 1844, played a significant role.[23] It is there where two analogous categories of corporeality – *Körperform* (volumetric form) and *Körperkern* (volumetric kernel, which refers to the 'essence' of the corporeal condition) – are related primarily to the built form. Bötticher's book is also where the idea of *Körper* entered architectural discourse as 'corporeal', differing from the idea of (human) body and equivalent to a geometrically graspable volume.

The Swiss art historian Werner Oechslin argues that these concepts derive from Bötticher's discussion around *Kernform* (or kernel form), which refers to 'what is mechanically necessary, the statically functional schema', and *Kunstform* (or artistic form), which is the mere 'ornamental hull'.[24] For Bötticher, Oechslin explains, 'the essential quality that characterizes the Hellenic architectonics in general and that lends it the status of "principle" is the "ideal quality" of the organic bond' between both.[25] However Bötticher's attempt to make the abstract 'kernel form' concrete, volumetric and corporeal led him to describe this

[23] Bötticher's theory of tectonics privileges the clear expression of construction and structure of any symbolic meaning. As architectural historian Kai K. Gutschow explained, through a detailed formal analysis of Greek architecture Bötticher's *Tektonik* proposed a synthetic understanding of history, tradition and the origins of architectural ideas, as well as the practical, mechanical side of building. See Gutschow, 'Restructuring Architecture's History: Historicism in Karl Bötticher's Theory of Tectonics', paper presented at the conference (Re)viewing the Tectonic: Architecture/Technology/Production, ACSA East Central Regional Conference Proceedings, The University of Michigan, A. Alfred Taubman College of Architecture + Urban Planning, 3–5 November 2000. See also Gottfried Semper, *Der Stil in den technischen und tektonischen Künsten, oder praktische Aesthetick, etc.* (1860) and Adolf Hildebrand, *Das Problem der Form inden bildenden Künsten* (1893).

[24] K. Bötticher, *Die Tektonic des Hellenes* (Potsdam, 1844), and quoted in Werner Oechslin, *Otto Wagner, Adolf Loos, and the Road to Modern Architecture*, trans. Lynette Widder (Cambridge: Cambridge University Press, 2002), p. 50.

[25] Werner Oechslin, *Otto Wagner, Adolf Loos*, p. 51.

coherence also in terms of Körperform,[26] a concept that reflects its inherent structural function but that also finds its definition in the outer 'spatial borders drawn'.[27]

Originally complementary, the contrasting juxtaposition of *Kunstform* and *Kernform* would in time become an opposition. It was so during the time of the lecture, and it is evident in Gropius's preference for the notion of 'corporeality'. According to Oechslin, this antagonism was partially reinforced by the migration of these concepts into new emergent pictorial representation[28] in which *Körperform* referred only to the volume and *Körperkern* referred to the 'kernel' as a volumetric structural component free of any ornament and which in itself could perform as a building[29] – just as Gropius's silos did. The silos that Gropius projected were free from ornament and chosen as 'illustrations' because of their volumetric and purely exterior appearance. Therefore, it can be argued that the silos point to this desire for *Körperkern*.

Within art history and empathy theory, August Schmarsow took over Bötticher's theory and juxtaposed a new understanding of Oechslin's *Kunstform* and *Kernform*. For Schmarsow, architecture was the entity that gives form to space. As a consequence, decoration was removed and the image of 'kernel and hull' started to dissolve. Interestingly, this dissolution also implied that the eye remained on the surface of the corporeal volume, and thus in its image – an

[26] Bötticher, *Die Tektonic*, p. viii.
[27] From Bötticher, *Die Tektonic* and quoted in Werner Oechslin, *Otto Wagner, Adolf Loos*, p. 52. This conceptual understanding is also useful in understanding two other key points in this dissertation. The first is the Pavilion's reconstruction. The reconstruction process may reflect on the notion of *Kernform*, but what it hoped to reproduce is *Kunstform* derived from the Berliner Bild-Bericht; that it 'looks like' the Berliner Bild-Bericht can be an expression of this will (see Chapter Five). The second point, as explored in Chapter Four, is Banham's reading of the silos, where there is a tension between Banham's attempt to read them as *Körperform* and the inevitable return to *Kernform*.
[28] For instance, *Kunstform* was replaced by *Stilhülse* (stylistic hull), and *Kernform* was replaced by the more concrete 'corporeal kernel', corporeal core, or *Körperkern*. Bötticher defined it as following: 'The kernel of each structural component, denuded of all decorative attributes, is, in its naked corporeality, already entirely capable of fulfilling all functions related to a building': from Bötticher, *Die Tektonic* and quoted in Werner Oechslin, *Otto Wagner, Adolf Loos*, p. 53.
[29] From Bötticher, *Die Tektonic* and quoted in Werner Oechslin, *Otto Wagner, Adolf Loos*, p. 52.

image that Gropius asserted and exemplified through his 'illustrations' of silos on that very night of his lecture.

A close look at the silos projected by Gropius reveals one common pattern: a sequence of cylinders, a symmetrical array of bins, of pure rational cylindrical forms mainly built in ferroconcrete, the modern material par excellence. These were isolated volumetric objects, rather than structures built and designed by builders and engineers, that were abstracted through the effacement or obliteration of their geographical location.[30] Using these images was Gropius's way of engaging with a renewed aesthetic (see Figure 3.11) – a formal and visual language that he incorporated from the arts into the general architectural discourse of the time.

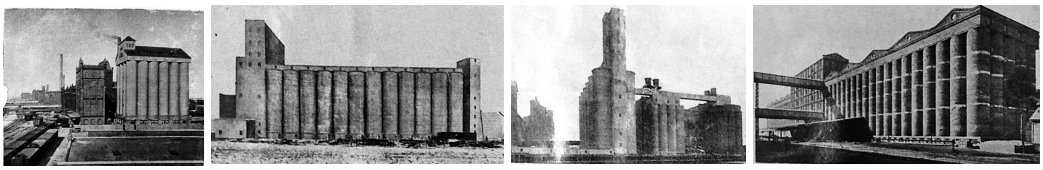


Figure 3.11. Selection of silos that Gropius used in 1911 and 1913. From left: corn silo of the Rolands Mill in Bremen; corn silo in 'South America'; Washburn Crosby silo in Buffalo; and Bunge y Born silo in Buenos Aires.

Consequently, on the evening of 1911 and thereafter, the silos performed as images and examples of architectural modernism. They expressed themselves corporeally through reduction, dis-ornamentation, and abstract geometries. Furthermore, they responded to Gropius's interest in theoretical models – the silos as 'naked kernels' triggered an empathic response that, in Gropius's words (and as noted above), 'mak[e] us shiver, which through [their] sheer size

[30] It is curious how Gropius seems so attentive to naming the engineers of the silos in the lecture, while at the same time the architectural uptake of the images involved effacing the engineers and architects that relate to his choice of images. Gropius respected the names of the 'authors' when 'authors' existed and had been recognised within architecture, and hence already had some kind of 'official' status within architecture. Some of his images in the *Werkbund Yearbook* give an account of this. However, for the 'new' ones, or the ones he 'discovered', there was an intentional obliteration of all 'authors'. This is also part of the logic of the reiteration of the canonical (or the construction of the canon through reiterative practices) that this study addresses.

overwhelms us mentally'.[31] The silos were objects that justified his quest for monumentality. However, the discussions around the 'hull' and the 'kernel', as well as the use of empathy theory, were not the only ones that informed Gropius's notion of corporeality. A related debate – the hesitancy of iron and the preference for stone as a means of architectural expression – also determined his discourse.

This discussion around corporeality took place not only among architects and engineers but also in the sphere of art historians. It had already been raised in the mid-nineteenth century when the use of iron rather than stone was challenged as the material fit for art and the normative concept of architecture, as Gottfried Semper argued.[32] While architects firmly believed that the use of stone or the new and modern ferroconcrete would embody a corporeal and therefore 'mass style' monumental architecture, engineers strived for iron as 'line' or 'scaffold style'. For instance, in 1867 architect Ludwig Bohnstedt stated that although iron was an ideal material for engineer's constructions, it was completely inappropriate for architecture as it could not appear 'undisguised' and, due to its lack of corporeality, it would not be able to carry the 'art-form'. Iron's volume could only expand and approach that of stone when it was shaped as a hollow body, that is, in contradiction to its material characteristics.[33]

A good source summarising this debate is provided by Georg Hauser, the editor of the journal *Deutsche Bauzeitung*, who, in 1890 and as part of a journalistic effort to question iron constructions and thus architecture's loss of 'corporeality', proposed a three-step plan by which the dematerialised lattice-and-rod construction would be visually transformed into a mass form, which only then made possible a 'corporeal' monumental architecture. In his words:

[31] It is interesting to note that Gropius foregrounds the size as a complementary means of expression of the terms above. Gropius, 'Monumentale Kunst und Industriebau', p. 1.
[32] See Gottfried Semper, *Der Stil in den technischen un tektonischen Künsten; oder, Praktische Ästhetik*, 2 vols (Frankfurt am Main: Verlag für Kunst und Wissenschaft, 1860–1863), pp. 263–64, referenced in Sokratis Georgiadis, 'Introduction', in Giedion, *Building*, p. 9.
[33] Ludwig Bohnstedt, 'Über die Bedeutung des Eisens für die Baukunst', *Deutsche Bauzeitung* (1867), referenced in Dieter Dolgner, *Architektur im 19. Jahrhundert: Ludwig Bohnstedt – Leben und Werk* (Weimar: Hermann Böhlaus Nachfolger, 1979).

> Depending on the shape of the web, the expression of the compartmented style changes as follows:
> 1. If the web consists of the lattice-and-rod system that characterizes the 'iron style,' then we have an invisible architecture...
> 2. If the web is a thin but generally enclosing wall, then we have a bodiless, materially weak, yet very visible architecture, even in iron...
> 3. If the web is massive in whatever material, then we have a corporeal, monumental architecture, in which the principle of 'flange and web' can be appreciated as an artistic idea, both for its stability and for its basic decorative richness.[34]

Or, in the words of the art critic and writer Karl Scheffler: 'The line means nothing in architecture, mass everything.'[35]

Pointing to iron as a possible substitute for stone was Hauser's ambiguous theoretical claim. And it was Gropius's too, as in his lecture he used a retouched image of a bridge near Griethausen am Rhein in Germany that, coloured blue on its right side, aims to illustrate how the bridge as iron beam is only a 'bodiless line-structure without light and shadow' (to the left of the bridge structure) and, pointing at the altered surface (on the right end of the bridge), to clarify that, once concealed, the optical image of the bridge would change accordingly as it would be the 'illusion of a powerful corporeality' (see Figure 3.12).[36] Gropius's intentional alteration of this image would not have been visible to any of the lecture's attendees. The nature of the *Lichtbild* as a black-and-white image veiled Gropius's alterations. It is only by looking closely at the thumbnail reproduction on the manuscript of the lecture that it is possible to see that, on the right side, the iron structure appears 'concealed' by a hand-drawn colour surface. This alteration simulates an enclosed surface around a part of the bridge's structure. It was deliberately done by Gropius to visibly illustrate 'how much stronger the architectonic expression would be if the builder would have

[34] Georg Heuser, 'Ein Nachwort zu den 'Stilbetrachtungen', *Deutsche Bauzeitung*, 24 (1890), pp. 626–31, trans. and referenced in Georgiadis, 'Introduction', p.16.
[35] Karl Scheffler, *Moderne Baukunst* (Berlin: Julius Bard, 1907), p. 19.
[36] Translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', pp. 9–10.

used a simple cladding over the girder truss'.[37] The left image below corresponds to the projection of a black-and-white copy printed on a transparent surface (to replicate glass). It was produced from the thumbnail that appears in Gropius's manuscript (on the right) in order to simulate how this was seen when projected.

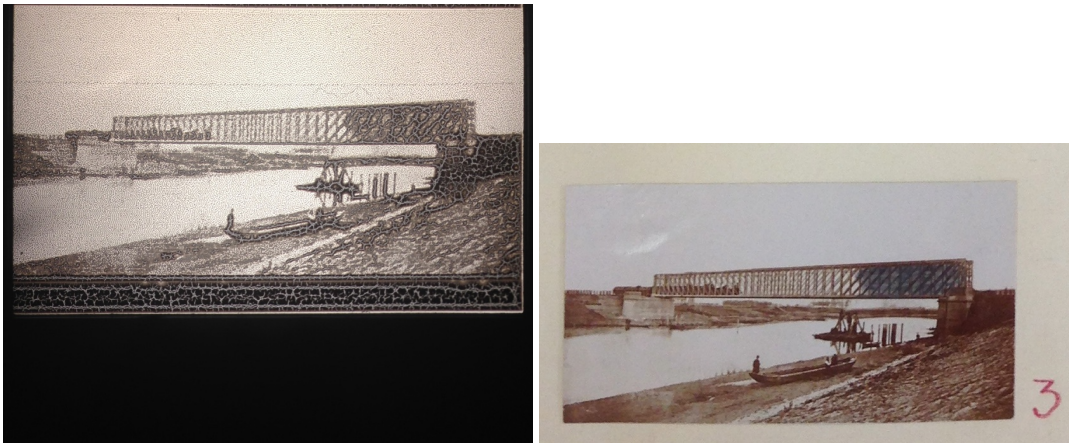


Figure 3.12. Slide three from Gropius's 1911 lecture manuscript. Iron bridge near Griethausen am Rhein in Germany. Image right: Blue colouring to simulate metal sheet or wooden concealment. Source: right: author; left: Walter Gropius, 'Monumentale Kunst und Industriebau' (Machinenmanuskript, 37, S) Walter Gropius Nachlaß, Bauhaus Archiv Berlin.

This image evidences that in Gropius's 1911 lecture this corporeality, so fundamental to his argument, was further materialised through the *Lichtbilder* – insofar as the image is material it confirms the materiality (corporeality) of the object. Moreover, there is a second corporeality – the corporeality of the image.

3.3.2 The corporeality of the image

All of Gropius's 69 photographic images of built examples were transferred from paper to glass, to then be projected. Although most commonly used in art history lectures at the time, the extensive use of glass slides was also beginning to

[37] 'wie viel stärker architektonische Wirkung wäre, wenn der Erbauer eine einfache Verkleidung der Gitterträger vorgenommen hätte': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', p. 18.

migrate into architectural discourse as an effective instructive means, as Gropius's lecture and Osthaus's project of housing a Diapositivzentrale within the Folkwang Museum demonstrate.

Like all *Lichtbilder*, those used in 1911 were photographic reproductions consisting of images supported on glass bases, protected by glass covers, and usually held together with cloth tape. Although originally made from paper prints, the materiality of Gropius's slides indicate that they were rare photographic images and produced as duplicates from original or composite negatives, which were generally printed onto the glass slide either by contact or by optical printing processes. This is important to point out as the difference is subtle but significant. While the contact printing process replicates the process of photographic development but onto glass, the optical printing process replicates the process of photographic projection onto a surface. In other words, and as explained by the *Optical Magic Lantern Journal and Photographic Enlarger* (1896),[38] for the process of contact printing a frame is initially used to hold the emulsions of the negative and the slide together in close contact. When set, a light is shone through the negative exposing the emulsion of the slide. The slide is then processed using photographic developer, stop bath and fixer, before being washed and dried. Once dry, the slide is mounted with the optional aperture mask and cover glass and then bound together with gummed tape. In contrast, the optical printing method exposes the image by projecting the negative, or negatives, onto a slide coated with emulsion. The processing procedure is the same as that used in contact printing. In both cases the result is the materialisation of the projected image as a black and grainy surface onto the transparent glass. A once photographic image is now transferred on to the transparent glass using chemical emulsions. This surface becomes the representation of the portrayed building, which in contrast to any photographic negative that is meant to be printed, comprises a series of black patterns enriched and heightened by the use of substances such as phosphate of soda.

[38] *Optical Magic Lantern Journal and Photographic Enlarger*, 1896.

This chemical embodies each solid element as a different density of black (with neutrals or greys) that would block any trespassing light when projected. All solid elements would thus appear as shadows and mostly rendered as black or greys (in Gropius's lecture, masses and surfaces but also trusses and webs) in contrast to the absence of solid material that would leave unaltered transparent glass allowing light to pass through. Significant to Gropius's purpose, the corporeality of the image is defined by the density of the patterns that enhanced any volumetric characteristic, any corporeal mass, and thus, importantly, the corporeality of any buildings. For Gropius, 'corporeality' is not only the characteristic definition of a 'monumental style' building, since it is also the result of a photographic process qualitatively different from other forms of reproduction.

Hermann Grimm, Professor of Art History at the Humboldt University in Berlin, introduced as for the first time the use of glass slides in the German context. As an established discipline, *Bildgeschichte* (or history with images) depended on photographic reproductions that could be projected in lecture halls to large audiences. Grimm believed in the technically aided objectivity that the use of *Lichtbilder* embedded, while recognising the complexity of the medium: photography was more than just a duplication of the object.[39] In contrast to any printed photograph, the *Lichtbild* defined the object when projected as an illuminated reproduction. It was the projection device of the sciopticon, the earliest form of mineral oil lantern, that allowed him to do so. The word 'sciopticon' is itself revealing when thinking about the nature of the *Lichtbild* as explained above, but also in relation to Gropius's choice of projected *Lichtbilder* and his notion of corporeality. Derived from words that signify 'shadow' and 'to see',[40] the sciopticon was a device for 'seeing shadows' produced by the black patterns, or in relation to Gropius's purpose for 'seeing corporeality'.

[39] See Lorraine Daston and Peter Gallison, 'Das Bilder der Objektivität', in *Ordnungen der Sichtbarkeit: Fotografie in Wissenschaft, Kunst und Technologie* (Frankfurt am Main: Suhrkamp Verlag, 2002), p. 57.
[40] A.A. Woods. *Magic Lanterns: How made and how used. With practical hints to unpracticed lecturers* (London: E.C. Wood, 1896), p. 17.

Although the projection and the use of *Lichtbilder* implied for Grimm, as for André Malraux many years later, that the artwork, by being subjected to a series of alterations of scale and colour, as well as of texture, frame and context, would therefore lose the plastic qualities of any artwork, they would also give rise to an understanding of photography as a tool towards the intellectualisation of the artwork, or what Malraux denominated as 'fictitious' arts due to the alterations that any artwork suffered when projected.[41] For Grimm, the pictorial mechanics of the sciopticon were not about illusion, deception, or simulation, but rather about effective, functional and good-enough transparency that productively enabled new aspects of the artwork to appear, as, for instance, in the case of Gropius's notion of corporeality.[42]

Furthermore, the projection of photographic reproductions turned them into verbal images, as the projected representations were usually accompanied by verbal narrations. Within the art historical tradition, the succession of projected images asked them to be verbalised in a specific way, which for Wölfflin meant to forget the historical circumstances of an artwork's coming into being, and instead to focus on what can be done with historical art, in terms of categorical vision, in the 'here and now'. Significantly, the use of *Lichtbilder* is integral to this position. As Wölfflin himself wrote: 'Not only more examples can be shown, but variants and exceptions can be brought forward without danger of distracting the hearer, since the keynote may be immediately struck anew.'[43]

One of the criticisms of this teaching method was expressed by Walter Benjamin in his 1933 essay 'Rigorous Study of Art',[44] where he discusses the work of Alois

[41] André Malraux, 'Museums without walls', in Malraux, *The Voices of Silence*, trans. Stuart Gilbert (St Albans: Paladin, 1974), p. 21.
[42] Dan Karlholm, 'Developing the Picture: Wölfflin's Performance Art', *Photography and Culture*, 3.2 (2010), p. 209.
[43] Heinrich Wölfflin, *The Sense of Form in Art: A Comparative Psychological Study*, trans. A Muehsam (New York: N.A. Shatan, 1958), p. 4 (first published in 1931 as *Italien und das deutsche Formgefühl*).
[44] 'Strenge Kunstwissenschaft. Zum ersten Bande der Kunstwissenschaftlichen Forschungen' which appeared under Benjamin's pseudonym Detlef Holz on 30 July 1933 in the literature section of the *Frankfurter Zeitung* (Jg. 78, Nr. 561, 2. Morgenblatt, Literaturblatt Nr. 31, S. 5). This essay,

Riegl and Heinrich Wölfflin, providing an understanding of his own position within art history methodological debates, and, in return, outlining a model for the study of art. This is relevant for the discussion of Gropius's 'new monumental style', because Benjamin argues that artworks are supposed to be studied and not only 'experienced' as Wölfflin had claimed. According to Benjamin, there is a direct relationship between the 'meaning content' and the 'material content' of the work of art:

> It is this correlation that gives rise to reciprocal illumination between, on the one hand, the historical process and radical change, and on the other hand, the accidental, external, and even strange aspects of the artwork. For if the most meaningful works prove to be precisely those whose life is most deeply embedded in their material contents ... then over the course of their historical duration these material contents present themselves to the researcher all the more clearly the more they have disappeared from the world.[45]

Benjamin reflects both on the historical-material situation from which the artwork was developed and on the materiality through which it is represented. It echoes Gropius's method of situating his examples historically, as well as on the presentation of their material content, which, aided by the use of the projector and the projected *Lichtbilder*, performed in accordance with the 'illustrations' selected.

Consequently, the *Lichtbilder* made it possible to reduce most contextual information about the projected artwork and to address directly what was meant to be shown, thereby effecting a 'new mode of looking'[46] due to the immediacy of the photograph. But it was also a 'new mode of looking' that was informed by the voice of the lecturer. It was certainly a 'new mode of looking' that Gropius enabled with his 1911 lecture through his use of *Lichtbilder* and in his notion of corporeality.

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and an earlier one that had remained unpublished, were interpolated in *October*, 47 (Winter, 1988), pp. 84–90.

[45] Walter Benjamin, 'Rigorous Study of Art', *October*, 47 (Winter, 1988), p. 86.

[46] Hermann Grimm, 'Die Umgestaltung der Universitätsvorlesungen über Neuere Kunstgeschichte durch die Anwendung des Skiopticons', in Grimm, *Beiträge zur Deutschen Culturgeschichte* (Berlin: Verlag von Wilhelm Herz, 1897), pp. 308–10, cited in Benjamin, 'Rigorous Study of Art', p. 86.

3.3.3 Two 'corporealities' in one

This second excerpt moves to the moment when Gropius started to project the images and accompany their projection with words. All snapshots below are of a performance that reimagined and restaged parts of Gropius lecture. Given the impossibility of projecting lantern slides, the projected images are the result of a process of copying and printing as black and white on a transparent surface that, when projected as 35mm slides, created a similar experience.[47]

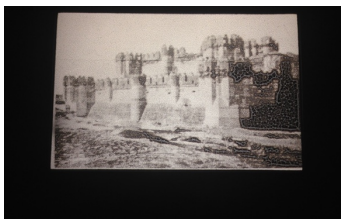
[excerpt 2 starts here]

> After more than one hour of imageless lecture, the lights went out. The room was entirely darkened. The sound of the projector invaded the lecture hall while a white circle of light appeared projected on the temporary white canvas that faced the audience and had been placed between the two entrance doors. The *Lichtbilder* were put into the slide-holder upside down and inserted into the sciopticon waiting to be projected. Gropius's figure disappeared in the darkness of the lecture hall while his voice remained. At that moment, the lecture mode shifted from an embodied to a disembodied form of speech while the ephemeral projected image started to be made manifest.[48] Eyes stopped concentrating on Gropius as a lecturer and shifted to the projected images, which sequentially started to be projected one after the other.

[47] Two different performances addressed this lecture. The purpose of them was to spatialise the experience of the lecture, and to experience the thumbnails that appear in Gropius's manuscript as projected *Lichtbilder*. The first was at Newcastle University, 8 May 2014; the second was at the University of Brighton, 20 March 2015.

[48] Dominique Païni, 'Should we Put an End to Projection?', trans. Rosalind Krauss, in *Projections: Les transports de l'image* (Paris, Éditions Hazan, 1997), reprinted in *October*, 110 (Autumn, 2004), p. 23.

The first image appeared. Eyes concentrated on the canvas where a contrasted and blurry image of a medieval castle was projected. Gropius started to read out loud his notes from page eighteen of his typewritten manuscript where the first small photographic thumbnail had been glued:



'Fortress Coca in north of Spain, ~~a medieval profane functional building.~~ All forms are proven derived from needs of war technology. Out of these requirements the observer has drawn his artistic consequences and has achieved a powerful effect under the renunciation of all ornamental form and motifs through modest means of rhythmic nature' Gropius read.[49]

While the image remained on the screen, and to explain what was going to come, Gropius continued: 'The reason for all the following examples of modern industrial and engineering buildings is to determine to what extent "corporeality", and respectively the space's enclosure in interior views, has been brought to its obvious expression.'[50]

[49] 'Burg Coca in Nordspanien, ~~ein mittelalterlicher Profaner Nutzbau~~. Alle Formen sind nachgewiesenermassen aus kriegstechnischen Bedürfnissen entstanden. Aus diesen Forderungen hat der Beschauer seine künstlerischen Konsequenzen gezogen und unter Verzicht auf alle Zierformen und Motive durch ganz bescheidene Mittel rhytmischer Natur eine gewaltige Wirkung erzielt': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', p. 18. Here and in other transcriptions and translation of the lecture, the struck-out words appear as such in the lecture's manuscript.

[50] 'Bei allen nun folgenden Beispielen moderner Industrie- und Ingenieurbauten handelt es sich darum, festzustellen, inwieweit die Körperlichkeit, bezw. Bei Innenansichten die Raumabgeschlossenheit sinnfällig zum Ausdruck gebracht wurde': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', p. 18.

Right after that, Gropius projected the image of a bridge. Simultaneously Gropius read on: 'Iron beam-bridge of conventional construction near Griethausen am Rhein.'[51] Clearly informed by the contemporary discussions about ferro-concrete and iron he had referred to this example previously by saying:



'A purely constructive iron bridge, the naked result of reasoned engineers' calculation is in many cases a fleshless bodyless line-structure without light and shadow. … If the construction of such a bridge was to be concealed by wood or sheet metal, nothing of the statistically mathematical calculations would be changed, but the optical image would, because now the illusion of a powerful corporeality would be offered to the eye which it had missed before. ~~One observes, what~~ role the illusion of corporeality plays in the sensual feeling, when for instance the open railing of a high-level balcony is covered with an opaque paper or canvas.'[52]

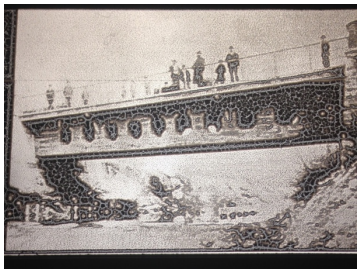
Gropius continued: 'Instead of the network of numberless steel beams through which the eye can see through, there would be, aesthetically speaking, the impression of a simple corporeal beam

[51] 'Eine eiserne Balkenbrücke üblicher Konstruktion bei Griethausen a/Rh ': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', p. 18.
[52] 'Eine rein konstruktive Eisenbrücke, das nackte Resultat verstandesmässiger Ingenieurrechnung, ist in vielen Fällen ein fleischloses, körperloses Liniengebilde ohne Licht und Schatten [...] Würde man die Konstruktion einer solchen Brücke mit Hold oder Blech verhängen, so würde an der statisch mathematischen Rechnung nichts Wesentliches geändert, wohl aber an dem optischen Bilde, denn nun wäre dem Auge die Illusion einer wuchtigen Körperlichkeit geboten, die es vorher vermisste. ~~Man beobachtet, welche~~ Rolle die Illusion der Körperlichkeit im sinnlichen Empfinden spielt, wenn man beispielsweise auf einem hochgelegenen Balkon vor die offenen Gitterbrüstung Papier oder Leinwand hängt': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', pp. 9–10.

and at the same time the eye of the passenger would be allowed a spatial halt.'[53]

Meanwhile, the light of the projector was traversing the *Lichtbild*. The light filtered through the glass slide at the same time as Gropius's voice, penetrating the immaterial spaces of the bridge as the 'beams through which the eye can see through' while not being able to do so in the case of the black surfaces that as shadows allowed for the 'passenger's spatial halt', hence emphasising Gropius's hand-drawn alteration. The light and shadow of the slide projection materialised Gropius's words on the screen, mirroring – in visual terms – his verbal argument.



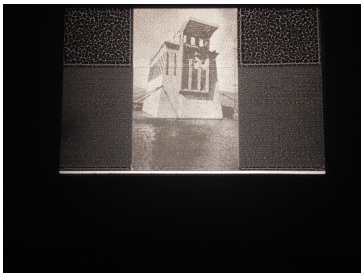




Five more photographs of reinforced concrete bridges appeared one by one. One in Italy, one in Peru, one in Ulm by Professor Bonnatz, one in Bamberg by Dyckerhoff & Widmann, and, lastly, one in Wales; all examples of different countries that, without any geographical or constructional context and purely based on their visual appearance, started to frame Gropius's discussion of the importance of 'corporeality' for monumentality, pointing out at the same time the meaning of light that traverses and the shadow that render.

[53] 'Statt des Netzwerks von zahllosen Drahtstäben, durch die das Auge hindurchsieht, wäre, ästhetisch genommen, der Eindruck eines einfachen körperlichen Balkens entstanden und ebenso würde dem Auge eines Passanten ~~ein~~ räumlicher Halt gewährt werden': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', p. 19.

This notion was to be further exemplified by other images such as 'A French torpedo experimental Pontoon in Ferro-concrete' on the left, a work which, as Gropius pointed out, was in clear opposition to structures such as Zeppelins and train halls: '[T]hrough the tent ceiling the daylight enters the space diffusely. The roof is therefore aesthetically ignored.' Gropius read:



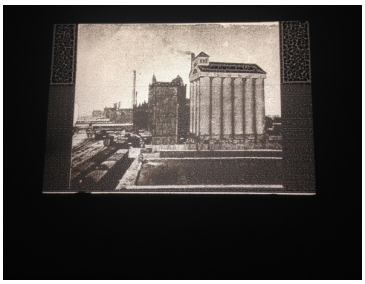
'A French torpedo experimental Pontoon in Ferro-concrete. The desire for flush unsevered wall surfaces in the interior is a result and consequence of the requirement of enclosed corporeality for the external impression of a building. In fact one can, in the newest construction, thanks to the conscious collaboration of an artist or the unconscious correct feeling of an engineer, see the attempt to collect the iron in enclosed beams instead of the confusing dissolved iron beams of the previous spider web-like roof beams. Of course naked iron offers a greater resistance to the artistic demands of enclosure than ferro-concrete, so often used in recent time.'[54]

In example after example, Gropius staged the discussion that in the end would lead to the climax where the concrete grain elevators would exemplify the 'new monumental style'. Yet

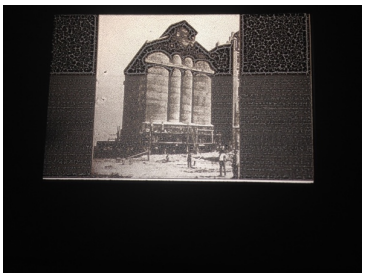
[54] 'Ein französischer Torpedo-Versuchsponton aus Eisenbeton. In Konsequenz der Forderung nach geschlossener Körperlichkeit für den äusseren Eindruck eines Bauwerkes ergibt sich für den isolierten Innenraum das Verlangen nach bündigen, unzerrissenen Wandflächen. In der Tat kann man bei den neusten Konstruktionen sei es ~~in~~ der bewussten Mitarbeit eines Künstlers oder dem unbewusst richtigen Empfinden eines Ingenieurs zu verdanken, das Bestreben verfolgen, an die Stelle des wirr aufgelösten Eisengestänges des früheren spinnweb~~en~~artigen Dachbinde das Eisen in geschlossenen Bindern zu sammeln. Das nackte Eisen setzt natürlich der künstlerischen Forderung nach Geschlossenheit grösseren Widerstand entgegen als der in neuester Zeit so viel verwendete Eisenbeton': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', pp. 22, 23.

before coming to that he elaborated on a few examples of factory complexes to illustrate how exemplary monumental buildings also provided a 'common work spirit' that enhanced production.

'To conclude, a few silo buildings from Germany and America', Gropius read. It is in this moment that the paradigmatic images of the silos were introduced and, one after the other, projected.

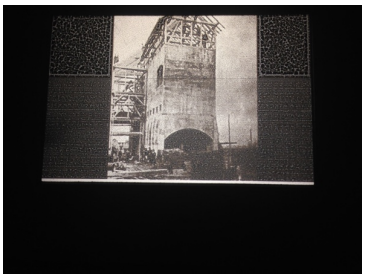


'Corn silo of the Rolands Mill in Bremen by Hilderbrandt & Günthel. The ratio of height to width seems a little unfortunate. The drums are here out of sheet metal, while the latter out of concrete or brick. This should be mentioned precisely because also here the material ~~is indifferent~~ has little to say for the great monumental main form and the artistic rhythm.'

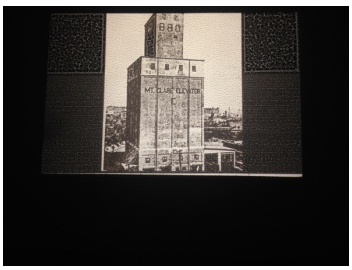


'Corn silo in Worms in ferro-concrete by the Firm Wayss & Freytag'

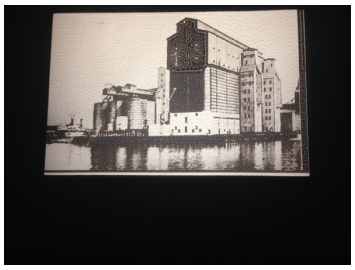
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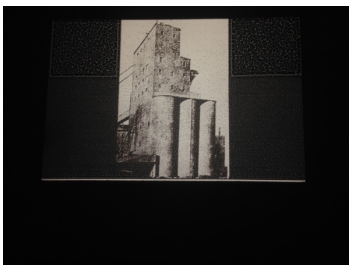
'Hard stone silo on Oberramstadt in ferro-concrete by the same company.'



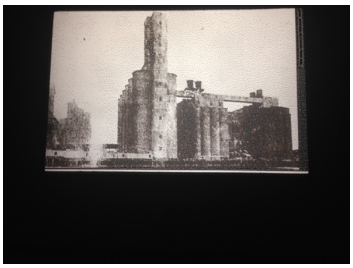
‘Gigantic silo and elevator of the Baltimore and Ohio railway association in Baltimore Architect Long. Completely constructed in ferro-concrete.’



‘Dakota elevator in Buffalo. The middle building is emphasised by the vaulted sheet metal plates between iron girders. The thickness of the wall is therefore minimal, nevertheless a powerful corporeal effect is reached.’



‘Corn silo of the Washburn Crosby association in the middle district of Minneapolis, North America, out of ferro-concrete.’



‘Corn silo of the same association in Buffalo.’



‘Corn silo in South America.’[55]

[55] This silo has always been credited as South American. It is actually in North America and was published by Von Ing. J Petersen, ‘Amerikanischer Speicherbau’, *Eisenbeton: Zeitschrift für Eisenbeton, Beton, Cementwaren – und Kunststein – Industrie*, 21 (8 November 1909), pp. 205–08. This confusion evidences how the images were acquired. Although most of the images Gropius projected that evening had been previously published in journals such as *Eisen Beton*, *Beton und Eisen* and *Der Industriebau*, other images were traded and exchanged without clarity of their provenance.



‘Corn silo in Buenos Aires. Completely in unfinished brick construction. Here apparently an artist contributed to this building.’[56]

Figure 3.13. Snapshots of copied lantern slides projected as black-and-white 35mm slides. Performance realised at the University of Brighton, 20 March 2015.

Gropius provided only two explanatory indications: one to make a reference to the unfortunate proportion of the corn silo in Bremen; and a brief reference to the Dakota elevator’s powerful corporeal effect. Only one adjective – ‘gigantic’ – described the size of one of the silos, while another one described the material nature of the building as ‘unfinished’.

By now the images were no longer accompanied by many words. At this stage there was no need. The argument was almost entirely being made by the agency of the projector and its projected *Lichtbilder*, whose shadows embodied the ‘corporeal’ (or volumes in black and grey) and whose light rays the ‘invisible’ (or air in white). In other words, Gropius’s quest for the ‘new monumentality’ was self-evident due to the dematerialisation of the projected photograph in light and shadow. At the same time, this dematerialisation paradoxically materialised the corporeality of the silos on the screen: the buildings’ solid elements, and thus

[56] ‘Zum Schluss noch einige Silobauten aus Deutschland und Amerika: Getreide-Silo der Rolands-Mühle in Bremen von Hildebrandt & Günthel. Das Verhältnis von Höhe zu Breite erscheint etwas unglücklich Die Trommeln sind hier aus Blech, bei späteren Beispielen aus Beton oder Ziegel. Es sei darauf hingewiesen, weil eben auch hier das Material für die grosse monumentale Hauptform und den künstlerischen Rhytmus ~~gleichgültig ist~~ wenig mitspricht. / Getreide-Silo in Worms in Eisenbeton, von der Firma Wayss & Freytag. / Hartstein-Silo in Oberramstadt in Eisenbeton von derselben Firma. / Riesen-Silo und Elevator der Baltimore & Ohio Eisenbahn-Gesellschaft in Baltimore, Architekt Long. Ganz aus Eisenbeton konstruiert. / Dakota-Elevator in Buffalo. Der Mittelbau ist durch gewölbte Blechplatten zwischen eisernen Trägern hergestellt. Die Wandstärke ist also minimal, trotzdem ist eine mächtige körperliche Wirkung erzielt. / Korn-Silo der Washburn Crosby Gesellschaft in Mühlendistrikt von Minneapolis, Nordamerika, aus Eisenbeton. / Korn-Silo derselben Gesellschaft in Buffalo. / Korn Silo in Südamerika. / Korn-Silo in Buenos Aires. Ganz in Ziegelrohbau. Hier hat offenbar ein Künstler mitgewirkt’: translated by Tilo Amhoff and transcribed from Gropius, ‘Monumentale Kunst und Industriebau’, pp. 34–36.

their corporeal mass, appeared as shadows and were seen by the audience as black in contrast to the non-existence of such which appeared as light.

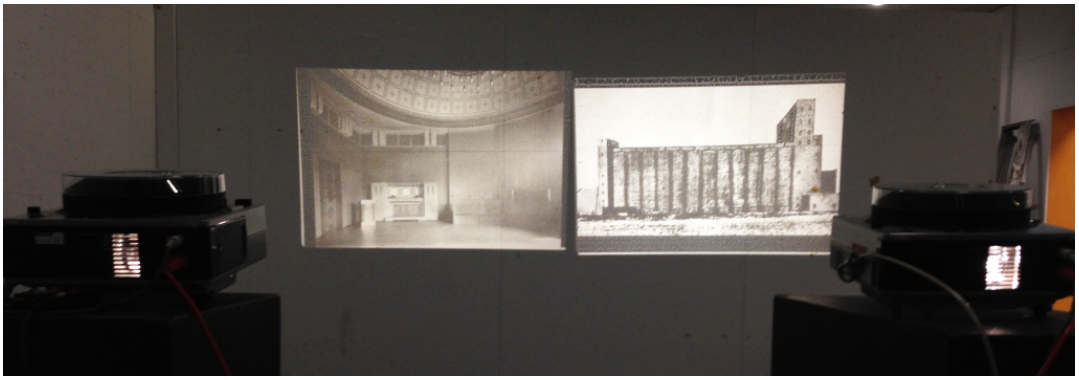


Figure 3.14. Double projection of lecture hall and projected silos that aims to recreate some of the spatial–temporal qualities of Gropius's performance, situating it while at the same time re-enacting the dematerialisation of the photographic image and its re-materialisation as a play of light and shadow when projected onto the white screen. Performance at Newcastle University on 8 May 2014.

3.4 Performed photographs

As a closing remark to the lecture Gropius read: 'The projected series of images makes no claim for completeness, but maybe with it evidence is nevertheless provided.'[57] It is this particular understanding of the 'performed' image that allows us to think through not only the inextricable and mirroring relationship between the 'corporeality of the image' and Gropius's notion of 'corporeality' as a precondition for the new monumental building art – between the projected image and the verbal argument, between the argument and the media – but also the relationship between the projection of the images and the projection of Gropius's narrations within the lecture hall as a one-off ephemeral event in itself.

[57] 'Die vorgeführte Bildeserie macht keinen Anspruch auf Vollständigkeit, aber vielleicht ist damit brocken der Beweis erbracht': translated by Tilo Amhoff and transcribed from Gropius, 'Monumentale Kunst und Industriebau', p. 36. The original word for projected appears in the manuscript as *vorgeführte Bildserie*, which comes from *vorführen*, meaning showing, present (films), demonstrate (apparatus), perform (trick). It's similar but different from *aufführen*, closer to perform (theatre), present (film), show. In this case I use the translation 'projected' (in reference to projection room, *Vorführraum*, and projectionist, *Vorführen*), or 'performed'.

Combining the spoken word with acts of projecting extensive photographic material, Gropius's lecture raises important questions such as why the lecture per se has been so widely overlooked as one of the main dissemination media of modernism. It is not surprising that architectural history has hitherto tended to neglect the status and significance of its lectures' delivery, enactment, and public. Indeed, as Adrian Forty writes, 'although we can read the texts' of lectures delivered by past architects, 'we have little idea how they were performed ... Yet performances they were, in a craft that has long been cultivated by architects, and which they continue to cultivate.'[58]

Echoing the performances of contemporary art historians such as Grimm and Wölfflin, or figures such as the 'film lecturer' who since the late nineteenth century was the voice behind 'animated photographs', Gropius's lecture introduced a third condition: building/image/voice. It was not only about showing, but also about telling. In this context, it is important to note that the projection of the *Lichtbilder* cannot be detached from the voice of the lecturer – from its 'grain' and its tone. The voice is not just part of the narration; it is also part of the *Lichtbilder*'s materialisation. And it is part of the subjective experience of the lecture itself, given Julia Kristeva's and Roland Barthes's propositions.

Both Barthes and Kristeva identify speech as embodied; thus, corporeality and subjectivity are tied to one another. For Kristeva, it is through the bodily use of language that subjectivity and experience are shaped; the scene of speaking subjectivity is speech; and subjectivity (through speech) is a signifying practice.[59]

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[58] Adrian Forty, review of *On Broadcasting Buildings: Architecture on the Wireless 1927-1945*, *Journal of Architectural Education*, 69.1 (2015).

[59] Julia Kristeva, *Revolution in Poetic Language*, trans. Margaret Waller (New York: Columbia University Press, 1984). If writing articulates a signifying process in specific networks or spaces, Kristeva argues, speech restores 'the diacritical elements necessary for an exchange of meaning between two subjects (temporality, aspect, specification of the protagonists ... and so forth)' (p. 87). See also Julia Kristeva, *Desire in Language: A Semiotic Approach to Literature and Art* (New York: Columbia University Press, 1980); Toril Moi (ed.), *The Kristeva Reader* (New York: Columbia University Press, 1984); Kelly Oliver, 'Julia Kristeva's Feminist Revolutions', *Hypatia*, 8.3 (1993), pp. 94–114.

For Barthes, the grain of the voice is the dual production of language, and a voice.[60] However, this chapter also emphasises 'grain' as the 'materiality of the body speaking',[61] and the relevance of that embodied subjectivity as something that cannot be detached from the event but which is lost in time in the impossibility of reproduction.

Drawing upon Kristeva's and Barthes's propositions, subjectivity here can therefore be understood as the third corporeality present in the lecture hall during Gropius's 1911 lecture, being the first the corporeality of the building and the second the corporeality of the image. In the lecture, works of architecture were not only projected as photographic representations but also as public acoustic visions, verbal images that, thanks to the projection of the lecturer's voice within the lecture hall, would tend to be better preserved in memory than would 'mute' real works of art, as Grimm had previously argued. Furthermore, one could argue that Gropius's voice performed not only as the narrative device but also as the mediator between modernity and its projection technology – between the new architectural discourse that these images shaped and constructed, and the technology and photographic material that enabled it. Cinema historian and theorist Germain Lacasse has discussed these episodes as serving 'the consolidation of scientific and materialist knowledge of the world, offering the spectator a narrative build-up by the reproduction of what he believed was the "real"';[62] a 'real' that was the equivalent to the projected images of silos and other industrial buildings; a 'real' that Gropius paradoxically had not yet been able to experience directly, and that like his audience he had been introduced to through photographic accounts.

[60] 'What I shall attempt to say the "grain" will, of course, be only apparently abstract side, the impossible account of an individual thrill that I constantly experience in listening to singing': Roland Barthes, 'The Grain of the Voice', in *Image–Music–Text* (London: Fontana, 1977), p. 181.
[61] Barthes, 'The Grain of the Voice', p. 182.
[62] Germain Lacasse, 'The Lecturer and the Attraction', in Wanda Strauven (ed.), *The Cinema of Attractions Reloaded* (Amsterdam: Amsterdam University Press, 2006), p. 187.

On that evening of 1911, Peter Behrens's lecture hall had become an 'experimental theatre',[63] a stage where projected images mirrored the read argument only due to the specificity of the industrial buildings chosen, and where the *Lichtbilder* allowed light to go through in such a way that Gropius's notion of 'corporeality' and the corporeality of the image became one and the same. The hall had become a stage where Gropius's performance was not only tied to the luminous 'transport of images'.[64] It was also tied to the representation of volumes on the flat surface of the screen, which conferred a critical dimension to the projected image[65] and to the cinematic form of their projection where the sequential projection defined, as Moholy-Nagy had argued, their perception as inextricably linked with their temporal duration on the screen.[66] On this stage, the illusions of the lantern slide lecture were only complete with the audience's attendance, the spatialisation and re-materialisation of the image, and the 'grain' of the voice of the lecturer. The verbal and the visual – in content but also in form – merged into one, as demonstrated in another German word that merges lantern slide and lecture: *Lichtbildervortrag*. This is not the same word as that used on the lecture's poster, where words and images were still separated into *Vortrag mit Lichtbildern*.

[63] See Dan Karlholm, 'Developing the Picture: Wölfflin's Performance Art', *Photography and Culture*, 3.2 (2010), pp. 207–15.
[64] Païni, 'Should we Put an End to Projection?', p. 23.
[65] Païni, 'Should we Put an End to Projection?', p. 28.
[66] See, for example, László Moholy-Nagy, 'Image Sequences/Series', in *Vision in Motion* (Chicago: Institute of Design, 1947), p. 208; and Gilles Deleuze, *Cinema 2: The Time-Image* (London: Athlon, 1989). A useful collection of essays relating to this debate is David Campany (ed.), *The Cinematic* (London: Whitechapel Gallery, 2007).

4

Banham's return

In *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture 1900–1925* (1986), art and architectural historian Reyner Banham returns to the canonical building structures of modernism to which Gropius initially referred in 1913: the daylight factory and the concrete grain elevators from the US (particularly those in Buffalo). This book, the result of more than ten years of research on the topic, is the reworked version of Banham's 1980 articles 'Buffalo Archaeological' and 'Catacombs of the Modern Movement', as well as his multiple lectures on the subject matter.

Banham's accounts of the elevators have always had the same starting point: the photographic reproductions of the silos as published by Gropius in the 1913 *Jahrbuch Des Deutschen Werkbundes.* In a characteristic tone, Banham frames his criticism of the modern use of the elevator photo-reproductions in his book when describing modernism as 'the first architectural movement in the history of art based on photographic evidence rather than on ancient and previously unavoidable techniques of personal inspection and measured drawings.'[1] This is

[1] Reyner Banham, *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture 1900–1925* (Cambridge, MA: MIT Press, 1986), p. 18.

a statement that today is acknowledged and repeatedly referenced by scholars in the field.

In lectures and publications, Banham was overtly critical of the photographic canon of the silos, as well as of its use by Gropius that determined an understanding of the silos as material and sculptural 'objects of awe' and as objects of aesthetic experience informed by empathy theory discourses – thus as 'art-objects'. Banham opposes this interpretation by returning attention to the elevators' industrial nature and embedded mechanised processes. By doing so, he puts the persistence of the elevators' modern imagery and interpretation into crisis. He presents the grain elevator as a mechanised process for the handling and commercial exchange of grain (as introduced by Joseph Dart in the late nineteenth century), and as a typology of process through the evolution of the elevators' subsidiary architectural parts – therefore as an elevator and not a silo.[2]

In this chapter I will address two issues. The first concerns Banham's use of photographic media, and the second concerns his understanding of the elevators' industrial nature as informed by the same media. After a close reading of Banham's slide lists housed at the Getty Research Institute, and of his 35mm slide collection held at the Architectural Association Photo-Library, I will suggest that Banham's use of the 35mm slide for his lectures had a crucial agency in developing his critique – and that it acted as a counterpoint to his written publications on the subject matter. I will first explore how Banham's reading of the elevators as 'mechanised processes' appear in his written publications to then trace how this understanding is shaped and constructed in his lectures. I draw attention to three crucial concepts that appear in Banham's slide lists, and that Banham used to classify the images of the elevators. These are the 'as is', the 'general view', and the 'detail'. These are not only the product of Banham's visual and methodological approach, but they are also the terms in which

[2] As described in Reyner Banham, 'Mythical Vernacular Monuments', audiocassette, Pidgeon Audiovisual Library, December 1982.

Banham, initially through projection, developed his photographic criticism of the elevators

However, and despite all efforts in emphasising the mechanised nature of the elevators, I will explore how Banham's use of photographs of the elevators prompts, at the same time, a parallel and contradictory return to a reading of these structures as 'art-objects'. Furthermore, this chapter will conclude by asking if this contradictory return to the 'art-object' also implies a return to the elevators' photographic canon and how that relates, on the one hand, to the elevators' 'memorability of the image' (to borrow the term from Banham's 1955 'New Brutalism' article) and, on the other, to their projection.

4.1 'Process' in publications

Before their well-known appearance in *A Concrete Atlantis,* Reyner Banham first considered the grain elevators in his discussion of megastructures in relation to the 1967 Montreal Expo, which took place in the shadow of a series of obsolete elevators that sat on the riverfront of the Saint Laurent River across the exhibition grounds. Banham initially defined them as megastructures *trouvées* due to their 'impressive size' and their 'purely functional enormity'.[3] His interest in the elevators' physicality and their industrial and mechanical nature first surfaced then. Later, in his 1980 article 'Catacombs of the Modern Movement: Grain elevators in myth and reality', Banham turned to the ruined interiors of the elevators where some of their mechanisms are housed – conveyors, spouts and bin-bottoms.[4] Alongside some of his snapshots, and drawing upon Melvin Charney's article 'The Grain Elevators Revisited' from 1967,[5] (see Figure 4.1), Banham wrote:

[3] Reyner Banham, *Megastructure: Urban Futures of the Recent Past* (London: Thames and Hudson, 1976), p. 117.
[4] Reyner Banham, 'Catacombs of the Modern Movement: Grain elevators in myth and reality', *Archetype*, 1.4 (1980), pp. 43–47.
[5] Melvin Charney, 'The Grain Elevators Revisited', *Architectural Review*, 37 (1967), pp. 328–31.

> An elevator is not a monument, it is a *process*. What makes it an elevator rather than as simple silo is the mechanical device which raises the grain to the top of the bins, and the other mechanical installations that move the bin to bin or dump it out into ships, trucks, barges or rail cars.[6]

The term *process* is used here deliberately, and, although it is not used as explicitly again, Banham nevertheless developed his critique based on the idea of the elevator as a mechanical process and typological evolution.

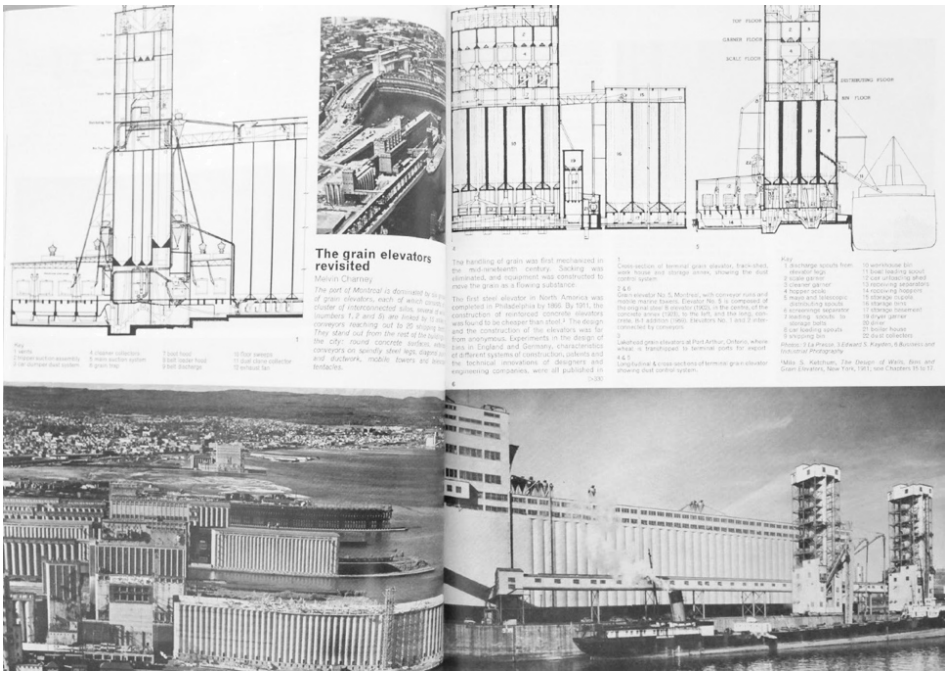


Figure 4.1. Double spread from Melvin Charney, 'The Grain Elevators Revisited', *Architectural Review*, 37 (1967), pp. 328–31.

This reading became the core of his criticisms. It is present and palpable in lectures and publications that Banham developed on the subject matter. These are: 'Catacombs of the Modern Movement: Grain elevators in myth and reality,'[7] 'Buffalo Archaeological',[8] and his 1986 book *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture 1900-1925*. In both articles, and

[6] Charney, 'Grain Elevators', pp. 328–31; Banham, 'Catacombs', p. 44.
[7] Banham, 'Catacombs', pp. 43-47.
[8] Reyner Banham, 'Buffalo Archaeological', *Architectural Review*, 167 (1980).

above all in the book, Banham makes clear that this understanding of the elevator as *process* stems from his dissatisfaction with the modernist critique of these structures, and he clarifies that his return to these canonical structures was inspired by their canonical photo-reproductions as they were the ones that prompted Gropius's interpretation in the first place.

This implies that Banham's return was arguably informed by the postmodern tradition of revisiting the past, (however modern in terms of function and process). His return to the elevators is a question of method that relates to the postmodern delineation of cultural meanings not as 'given' but as endlessly produced and contested.[9] As Claire Zimmerman has argued:

> The opposition 'modernism/postmodernism' is generally held to be more substantive – a border between two different kinds of effort, not to different degrees of the same thing. In architecture, it describes the moment when the past was no longer seen as a series of stable positions such as functionalism or structural rationalism, with specific ideological commitments that might be embraced anew, but rather as a catalogue of objects without stable meanings that might be adopted with only tangential reference to past political affiliations.[10]

As mentioned above, Banham's reading of the elevators as *process* was initially addressed in his 1980 articles, most explicitly in 'Catacombs'. 'Buffalo Archaeological' was Banham's first printed publication on the subject, and as such focuses on his impression when directly encountering them in a state of disrepair, suggesting a similar way of seeing to that proposed by Robert Smithson in 'The Monuments of Passaic' (1967), where Smithson's voice takes the reader through the encounter with ruinous monuments in a post-industrial

[9] Though most likely informed by it, Banham's return is not necessarily related to the renewed interest in the 1970s in the photographs of elevators as evidence of the shift from modernism to postmodernism. Charles Jencks, Robert Venturi, David Harvey and Frederic Jameson brought postmodernism into architecture by critiquing, among other things, the same grain elevator photographs that have played a major role in the iconography of modernity. For a similar argument, see Dave Tell, 'The Rise and Fall of a Mechanical Rhetoric, or, What Grain Elevators Teach us About Postmodernism', *Quarterly Journal of Speech*, 100.2, pp. 163–85.
[10] Claire Zimmerman, 'Photography into Building in Post-war Architecture: The Smithsons and James Stirling', *Art History*, 35.2 (2012), p. 285.

landscape.[11] In contrast to 'Catacombs', 'Buffalo Archaeological' addresses the elevators' physical existence as an invaluable witness to industrial history and as 'heroic fragments of former civilizations' and 'magnificent ruins'.[12] The two articles suggest what art historian Ann Reynolds (drawing upon Carlo Ginzburg) argues about Smithson's method whereby he 'reconstruct[s] a series of phenomena that [he] would like to analyse historically' and brings to the fore a typological and a historical connection that can be understood as 'comparative morphology' as it 'sweeps against history's hierarchical and chronological grain and restore[s] apparently negligible phenomena to view.'[13]

Banham's second article, 'Catacombs of the Modern Movement', is not only concerned with the obsolescence of the elevators. Banham's choice of personal photographs in the article acts as a counterpart to the argument he introduces: that the grain elevators should be understood in terms of their industrial and mechanised processes. For instance, when criticising modern imagery, and in order to demonstrate that Gropius misread the elevators simply as monumental containers, Banham chooses an image of the Patterson elevator in California and uses the image's caption to underline the difference between cylindrical containers and the interstitials among them (see Figure 4.2, upper image), in order to clarify that a silo is different to an elevator, and that an elevator is not only a unified object but an object composed of functional fragments. Furthermore, to introduce his point about mechanical process, Banham uses a photograph of the circular rooms and segmental interstitials that housed the elevators' conveyors and spouts, as well as detailed captions describing the function of Buffalo's electric elevators' marine towers or pioneering legs (see Figure 4.2, lower image).[14]

[11] Robert Smithson, 'The Monuments of Passaic', *ArtForum*, (December 1967), pp. 52–57.
[12] Banham, 'Buffalo Archaeological', p. 93.
[13] Ann Reynolds, *Robert Smithson: Learning from New Jersey and Elsewhere (*Cambridge, MA: MIT Press, 2002), p. xiii.
[14] Marine towers and pioneering legs are mechanisms that are either stiff or mobile and are attached to the storage building, in order to reach the vessel, scoop the grain out of ships and move the grain to the top of the warehouse.



ARCHETYPE

So it was an unreal and corrupted vision of American elevators that the Modern Movement followed. What had started out as utilitarian structures designed by (and for) hard-nosed operators who raided the world for cost-cutting technologies (neither Gropius nor Corbu seem to have known that the concrete construction systems were all European in origin) were promoted to the level of romantic symbols of a mythical industrial promised land to the West, about as real as the crystal towers of the legendary island of Hy Brasil that had lured credulous Irish voyagers to Atlantic dooms in the Middle Ages.

HOW TO MAKE AN ELEVATOR

Historically and technically, the fascination of elevators lies in their rock-bottom simplicity, their enormous scale, and their unnoticed refinements of economical construction. An elevator is, usually, a row of cylindrical concrete bins or silos (or several rows) each bin some 25 feet in diameter, 100 or more feet high, made of slip-formed concrete which is commonly eight inches thick at the base, but may be much thicker. The reinforcing rods run in horizontal loops at about 10-inch centers, wrapped around the vertical bars. The horizontal reinforcing loops first appeared in the mid-nineties in the patented Johnson-Record tile-built bins out of Minneapolis, but in the perfected concrete version they belong to the grand old French Monnier system. That system had, by the Nineties, been taken over by the equally grand old German Wayss und Freitag company, from whom it was imported (in the first instance to Minneapolis, once more) in 1900. The first American cylindrical concrete bin—familiarly known as Peavey's Folly—still survives outside Minneapolis, but now serves to advertise the Minnesota Vikings!

But to describe elevators in these purely constructional terms is to fall neatly into Gropius's functional/formalist trap. As Melvin Charney pointed out in his crucial revisionist article of 1967, an elevator is not a monument, it is a *process*. What makes it an elevator rather than a simple silo is the mechanical device which raises the grain to the top of the bins, and the other mechanical installations that move the grain from bin to bin or dump it out into ships, trucks, barges or rail cars.

The principle of the mechanical elevator (realized in his case by a steam driven bucket conveyor) is due to Joseph Dart of Buffalo, New York, who introduced it as early as 1843, just to raise the grain to the top of the bin, which in those days would have been a square wooden structure, not unlike the familiar shed-roof type still to be seen in part of the Middle-west and in the Canadian wheat-belt. In other words, the monumental ranked cylinders admired by Gropius and everybody else are not functionally necessary to the structure being an elevator, merely one way of holding the bulk grain as it passes through, an intermediate function which has been served at various times by bins of wood, brick, steel boiler-plate, hollow tile and other materials in various appropriate forms.

There is another way in which Dart is important but was not known to elevator-fanciers. Dart introduced mechanical handling primarily because he needed to get the grain out of the deep holds of ships—Buffalo was a terminal or transfer port, where grain was taken out of Great Lakes ships and put in canal barges (later, railcars). All the elevators illustrated by Gropius, borrowed by Corbu, visited by Mendelsohn are of this terminal type, which is different from the inland type seen by travellers in Oklahoma and the Texas panhandle, or in the evocative photographs of Frank Gohlke.

The difference of the Terminal type, whether in Buffalo, Montreal or Buenos Aires, or on the Canadian Lakes, was not only sheer size (until after World War II they were the biggest in the world), but more crucially in their being provided with these "marine towers"

Confusing Cylinders: what appear to be simple cylindrical containers of grain can deceive the unwary observer—not only do the windows indicate the presence of machinery, not grain, in the upper part of the central cylinders of this elevator in Patterson, California, but there is no room for the lower part to be a full cylinder—it is an *interstitial*.

Pioneering Legs: The Electric elevator had two marine towers (or legs) for lifting grain from ships' holds. That on the left appears to be the first rail-mounted "mobile leg" ever built, the equivalent of an eight-story building on wheels. 20 is a classic "stiff leg", an immovable concrete cylinder which uses storage-bin construction and form-work to produce a non-storage-bin, to house the machinery for a vertical conveyor.

44

Figure 4.2. Reyner Banham, 'Catacombs of the Modern Movement: Grain elevators in myth and reality', *Archetype*, 1.4 (1980), p. 44.

Banham's articles were the starting point of a long-term research project that materialised as *A Concrete Atlantis*. Over more than a decade – as evident in his archive – Banham collected related material, such as clippings, research reports, and pamphlets, that helped him to consolidate his argument. However, almost none of the images that Banham collected and produced during his years of research on the elevators and that refer to the elevators' mechanical processes

appeared in *A Concrete Atlantis*. Most of the photographs Banham used either replicate or reproduce those used by others so often before – the canonical photographs. Image 115 is, for instance, an example of Banham replicating Mendelsohn (see Figure 4.3).

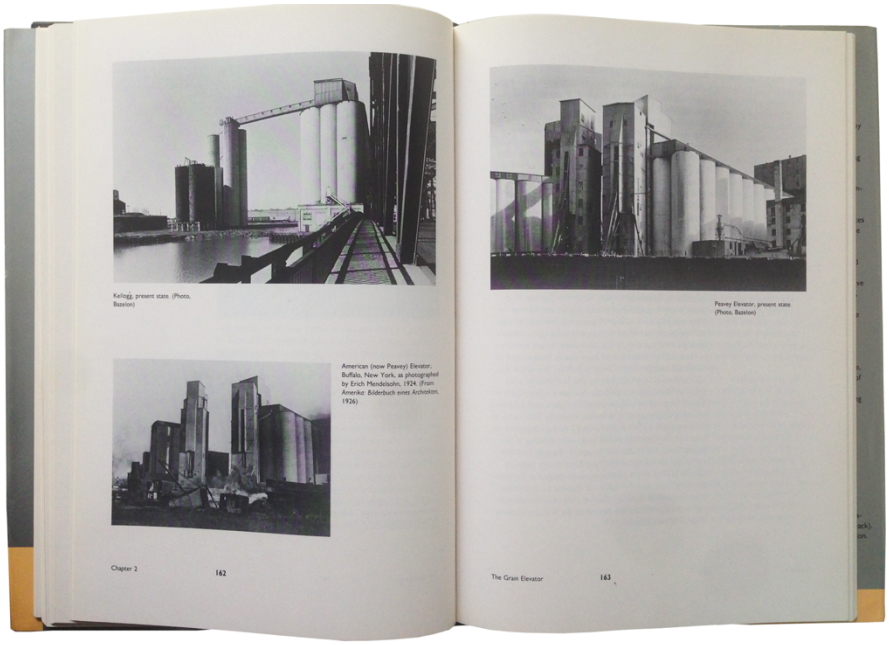


Figure 4.3. Spread of pages 162–63 from *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture*. Banham compares Patricia Layman Bazelon's photographs with those by Mendelsohn.

Nevertheless, despite Banham's un-archival stance[15] and the fragmented nature of his papers housed at the Getty Research Institute, there is important archival material that offers detailed visual accounts of *A Concrete Atlantis*' textual descriptions of the elevators' mechanical processes and typological developments, and which differ from the ones that appear in his publications. For instance, there is an undated survey map of the Geological Survey of the US Department of Interior that locates all of Buffalo's terminal elevators. It is significant as it evidences the geographical particularity of the terminal elevators (those on which Banham concentrates) in contrast to the transfer elevators (see Figure 4.4). There is also a series of undated images from Joseph Dart's mechanical elevator and Oliver Evans's flourmill that describe the mechanical

[15] As recounted by his son Ben in the conversation held with him, Mary Banham and Adrian Forty, 12 March 2015.

particularities that led to Dart's description of the elevators as a 'labour saving device' or Banham's interpretation of the elevators as an 'assembly of mechanisms'. There is a series of detailed drawings of the elevators' bucket conveyor-belts and of the plansifters (see Figure 4.5) as well as of the human labour involved in the sack-filling operation in a number of Peavey Company and Hennepin County Historical Society catalogues (see Figure 4.6). Moreover, there is a series of photographic proofs from Patricia Layman Bazelon, Banham's commissioned photographer for *A Concrete Atlantis*, that document in detail the moment of the arrival of the barge, and the process of scooping out the grain by the elevators' 'legs' and the scoopers (see Figure 4.7).[16] Evidently, Banham had collected visual material that could have supported the arguments about process that he made in *A Concrete Atlantis*, but instead he selected iconic photographs, or, as mentioned before and evident in the layout of *A Concrete Atlantis*, those that at least mimicked them.

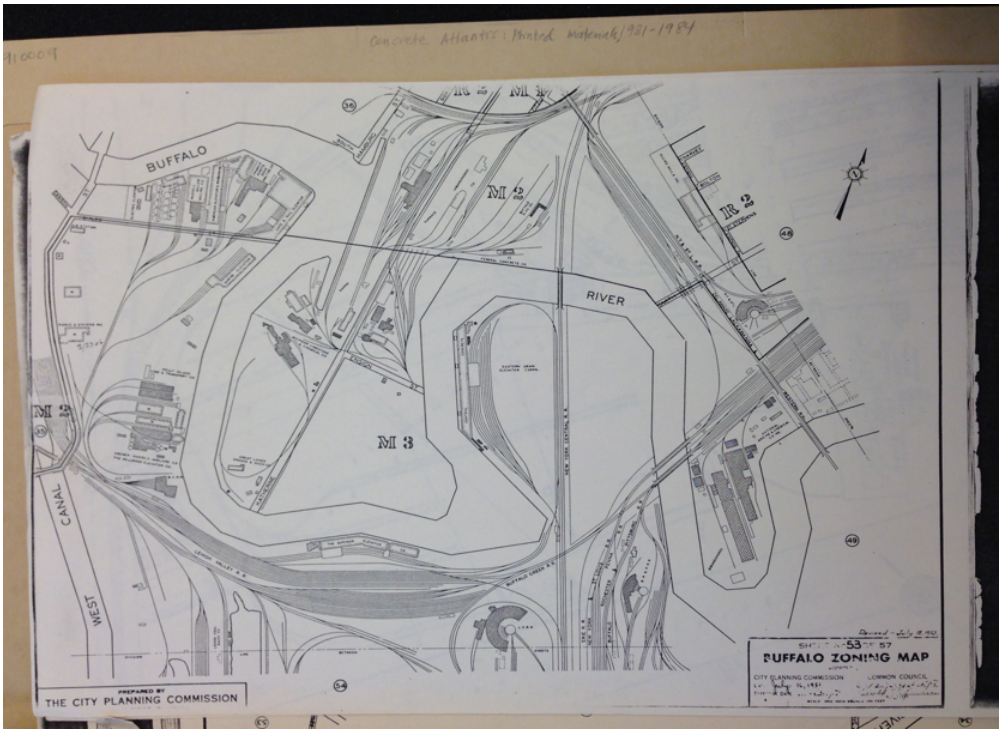


Figure 4.4. Excerpts from Geological Survey of the US Department of Interior that locates all of Buffalo's terminal elevators. Reyner Banham Papers 91009, Box 4, Folder 8 – Undated material. Getty Research Institute. Box 4, Folder 8 – Undated material. Getty Research Institute.

[16] Hadas Steiner has also discussed this issue in 'The Grain of the image', in Mirian Paesack (ed.), *Ineffably Urban: Imaging Buffalo* (Farnham: Ashgate, 2013), pp. 117–28.

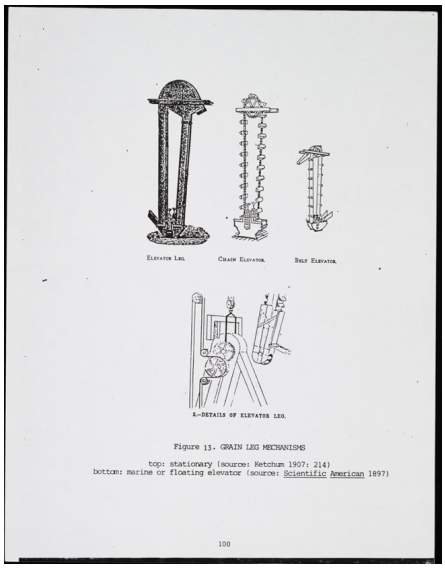


Figure 4.5. Right: Copy of a page of Raber Associates. Draft report: Cultural Resources Investigations in Brooklyn Reach 1: New York Harbor Collection and Removal of Drift Project. Conducted for New York district US Army Corps of Engineers. See detail of the grain leg mechanism. Reyner Banham Papers 91009, Box 4, Folder 8 – Undated material. Getty Research Institute.

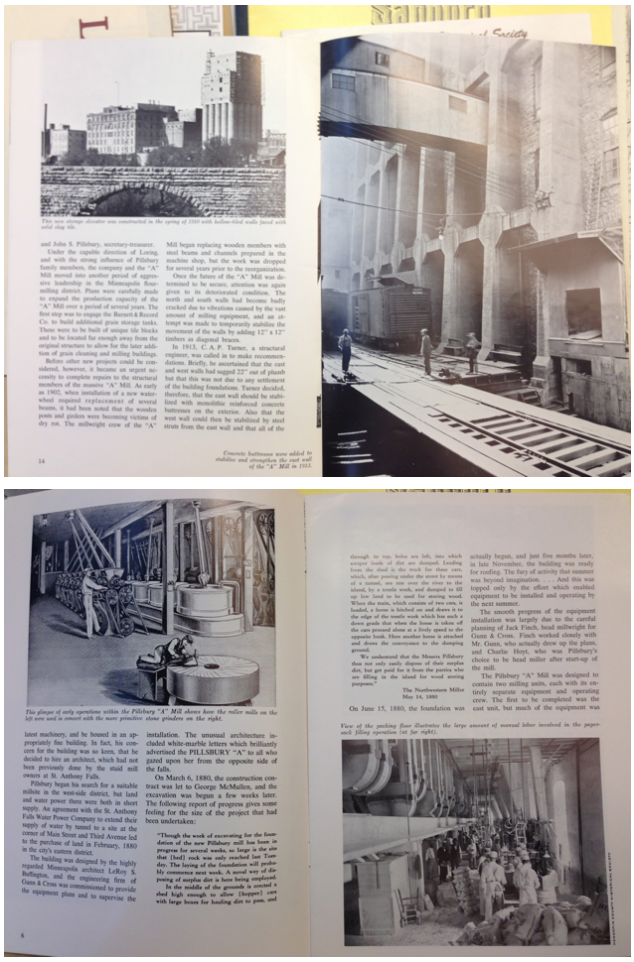


Figure 4.6. Right: Hennepin County Historical Society catalogues. Reyner Banham Papers 91009, Box 4, Folder 8 – Undated material. Getty Research Institute.

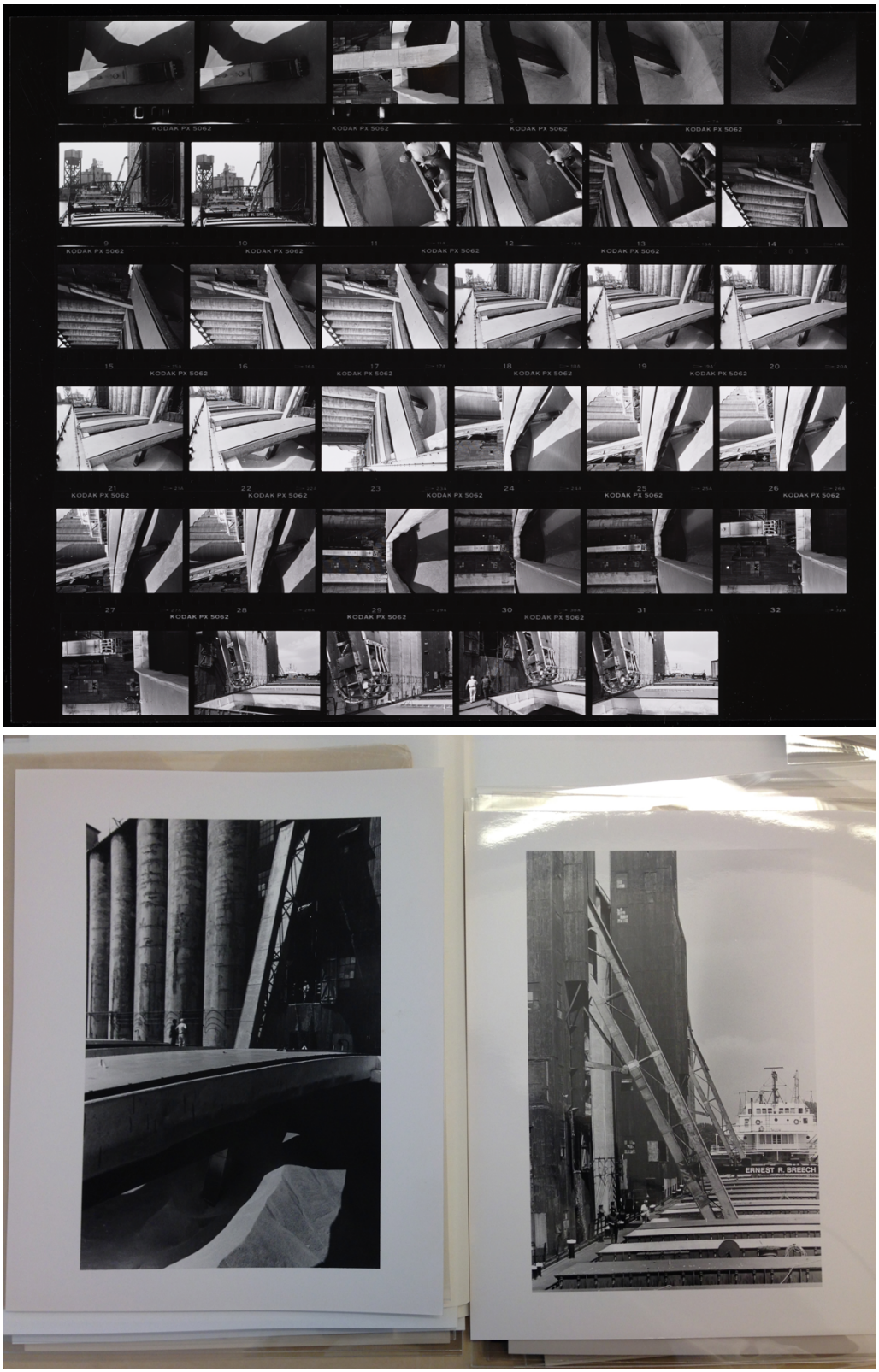


Figure 4.7. Patricia Layman Bazelon. Contact Prints for *A Concrete Atlantis* and enlarged prints. Reyner Banham Papers 91009, Box 3, Folder 5 – Undated material. Getty Research Institute.

This disjunction between the textual argumentation and the imagery that accompanied and contradicted that text by focusing on the elevators' external appearance and replicating the viewpoints of the modern photographic canon, prompts the question of what Banham was actually returning to – was it to the elevators as built architecture or was it to their photographic canon? This is something I will address later in this chapter. The following section will first turn to Banham's 35mm slides and slide lists to explore the agency of the 35mm slide and its projection in the construction of Banham's criticisms of the elevators. In response to Banham's obliteration of any visual material that accounts for the elevators as *process* in his written work, I will now explore how Banham's understanding of *process* derived from his own photographs and their projection.

4.2 Banham's 35mm slide collection

Banham's slide collection comprises only 35mm slides contained in fourteen archival folders. These folders were catalogued and organised thematically by his family and an assistant before being donated to the Architectural Association by his wife Mary Banham after her husband's death. They are labelled 'U.S. Industrial', 'Elevators', 'Buffalo Area', 'High Tech', 'High Tech and Megastructures', 'U.S. Deserts', 'California', 'California & Santa Cruz', 'South California', 'Tennessee Valley Authority', 'Art Galleries', 'Frank Lloyd Wright' and 'Philip Johnson'. Next to them are two other boxes that contain 'Banham's additional material'. Today this collection sits, quietly, on a shelf facing Bedford Square at the Architectural Association Photo-Library.

Having visited both archives where the entirety of Banham's material is housed, there is an evident dichotomy in terms of Banham's Los Angeles archive and the photographic collection kept in London. While the archive in Los Angeles houses the written material together with all sorts of textual documentation that was possible to collect after his death, the London archive is constructed solely of his own photographic images, materialised as 35mm slides. This split between text

being kept in Los Angeles and images in London is evidence of Banham's change from using more experimental to only photographic media after his move to the US in 1976. While his 1970s videos, such as 'The Black Box' (undated) or 'Building the Megastructures Model' (1976) were produced collectively, generally with borrowed equipment and mostly in the shape of an audiovisual manifesto (in this case with the collaboration of Archigram), and his television programmes 'Reyner Banham loves L.A.' (1972) and 'Roads to El Dorado' (1979) were produced and sponsored by the BBC, the 35mm slides only depended on a carousel projector, a portable camera, and a Kodachrome or Ektachrome film. Indeed, Mary and Ben Banham suggested that his geographic isolation in the US could have triggered this emotional move from the collective and public to the individual and private.[17]

Throughout his life, Banham owned many photographic cameras.[18] He shot photographs with all of them. However, his collection of 35mm slides are mainly the result of his Pentax SLR, as well as his Nikon G4 with a 50mm lens that does not allow for zooming in and out to a great extent but instead requires the photographer to adjust his or her position. What Banham's slide collection brings more strongly to the fore is his multi-scalar approach to buildings, which on the one hand responds to the limitations posed by his Pentax camera, but on the other is a product of his own interest. Banham's photographic shots of buildings, objects and landscapes are evidence of a photographer who moves closer to and further from the photographed object.

[17] Interview with Mary and Ben Banham, with Adrian Forty on 12 March 2014.

[18] 'When he started working for the Architectural Review in 1952, it was expected that staff writers would take occasional pictures for their articles, using an Architectural Press Rolleiflex. This was the good-quality German twin lens reflex camera, introduced in 1929, that was used by Bill Brandt, Brassaï, Lee Miler and many other documentary photographers of the 1930s-1950s ... A German folding-bellows camera was followed by a Yashica 44- basically a smaller version of the Rollei – taking 44mm-square negatives ... Photographs made with the Yashica 44 were taken for the LA book ... Banham moved on, like many others at the time, to a more convenient, semi-professional camera: a second hand Pentax, one of the new Japanese single lens reflexes (SLR). Amongst it many advantages was that it was 35mm, the format of the lecture slide, and that it offered through-the-lens-metering ... He eventually graduated to a Nikon G4, a fine, professional quality SLR with a 50mm lens, which is usually thought of as equating to normal vision': Mark Haworth-Booth, 'Reyner Banham and Photography', in Jeremy Ansley and Harriet Atkinson (eds), *The Banham Lectures: Essays on Designing the Future* (Oxford: Berg, 2009), pp. 64–65.


4.8


4.9


4.10


4.11



4.12

Figure 4.8. Alexandra road development (Neave Brown) – London (1968) B.5-011, (1978) B.5-004, B.5-006, B.5-008.
Figure 4.9. Union Pacific train – New Mexico (1980) B.7-542, B.7-251, B.7-252.
Figure 4.10. Lifting bridge – Cleveland (1978) B.13-123, B.13-125, B.13-122, B.13-117.
Figure 4.11. Chrysler building (William van Allen) – New York (1985) B.13-111, B.13-109, B.13-117, B.13-119. Figure 4.12. Concrete central elevator – Buffalo, (1979) USIND625-1, USIND625-6, (1978) USIND625-10, (1979) B.2-111, B.2-095, (1978), B.2-105, (1982) B.2-087, (1979) B.2-096, B.2-099.
Source: Online resource Architectural Association Photo-Library.

Throughout his collection, there are repeated shots that illustrate this scalar multiplicity: from distance, from different angles, up close and from afar. In Banham's archive, some photographic sequences stand out. An example is the Alexandra Road Estate (1968), designed by Neave Brown, which Banham photographed from the street and from inside its communal spaces, including a balcony detail (see Figure 4.8). Another example is a random train (one of many he photographed): Banham shoots the train from a distance, a coach of a train, and the moving mechanism of a train (see Figure 4.9). The Lifting Bridge from Cleveland is photographed from both banks of the river, close and further out (see Figure 4.10). Finally, there is a series of photographs from the Chrysler building by William van Alen in Lexington Avenue, New York (see Figure 4.11). The captions 'distant view' and 'entrance detail' from this building's slide mounts, as well as 'view from tracks while under construction' and 'concrete detail' in the case of Alexandra Road, acknowledge the scalar multiplicity of the objects depicted.

This approximation method is particularly striking when brought to the elevators. There are more photographs of these than of any other building typology spread over a period of ten years. The case of Buffalo's Concrete Central elevator from 1917 is the most telling one (see Figure 4.12). As Mark Haworth-Booth has written:

> Banham first photographed it in 1978. First, he photographed it from a distance and in context, then he moved closer. He returned in 1979 and photographed it looking heroically ship-shaped from below. He photographed it on a brighter day in 1979, capturing a potentially useful detail, titled *Detail*. He photographed inside and captured not only human scale but that important feature of the chamfered columns, discussed earlier, which provided protection against frost spalling or splintering.[19]

[19] Mark Haworth-Booth, 'Reyner Banham and Photography', in Ansley and Atkinson (eds), *The Banham Lectures*, p. 67. This description responds most likely to Haworth-Booth's experience of the 35mm slides.

Again, the captions of the slide mounts are telling. They read: 'exterior', 'exterior from north', 'exterior from south', 'view from east', and then 'stiff leg detail', 'detail view', 'detail of old machinery' and 'interior'. They were all handwritten on the slide mounts before the collection was catalogued, and today they are kept as archival categorisations.

Elaborating on Banham's photographic depictions of the elevators, architectural historian Hadas Steiner has argued for an understanding of this multi-scalar approach as 'photographic archaeology' or as 'cinematic': from 'afar and near, and then zooming in for closer investigations, details and interior studies.'[20] Though it is evident that there is clear archaeological intention in Banham's photographs (since it was arguably the only way to approach these already ruinous structures), rather than only a 'photographic archaeology' or a 'cinematic' account (which emphasises seamless transition from one shot to the other), I dispute Steiner's understanding and instead argue that Banham was elaborating a method of approximation (which Steiner terms 'photographic archaeology'), and an attempt to understand his object of study as a whole – as depicted in the 'general views' – and in its 'details' (which Steiner terms 'cinematic'). Without understanding the 'detail', it was impossible to understand the whole, and vice versa. The agency of such slides was also crucial for Banham's criticism. The 'general views' of the elevators allowed Banham to compare the modernist images with the encountered elevators, but they also directed his attention to the elevators' typological development. The 'detail' points to the embedded mechanical processes.

4.2.1 Banham's slide lists

In Banham's research papers at the Getty Research Institute in Los Angeles there is a folder containing multiple slide lists of some of the many lectures that

[20] Steiner, 'The Grain of the Image', p. 122.

Banham delivered after his move to the US. Together with some recently digitised videos, they are the only evidence of Banham's lecturing method and have so far been overlooked by scholars in the field. There are two undated lists that caught my attention. The first is entitled 'Elevators revisited' (see Figure 4.13) and the second is entitled '*Moderner Industriebau*' (see Figure 4.14). Both are about the elevators: the first is from one of Banham's seminars at Santa Barbara, the second for a lecture to be delivered in Calgary. With a German title, the second slide list is a direct response to Gropius's 1911 lecture and the first, as the title indicates, is a suggestion of 'revisiting' the elevators' historiography.

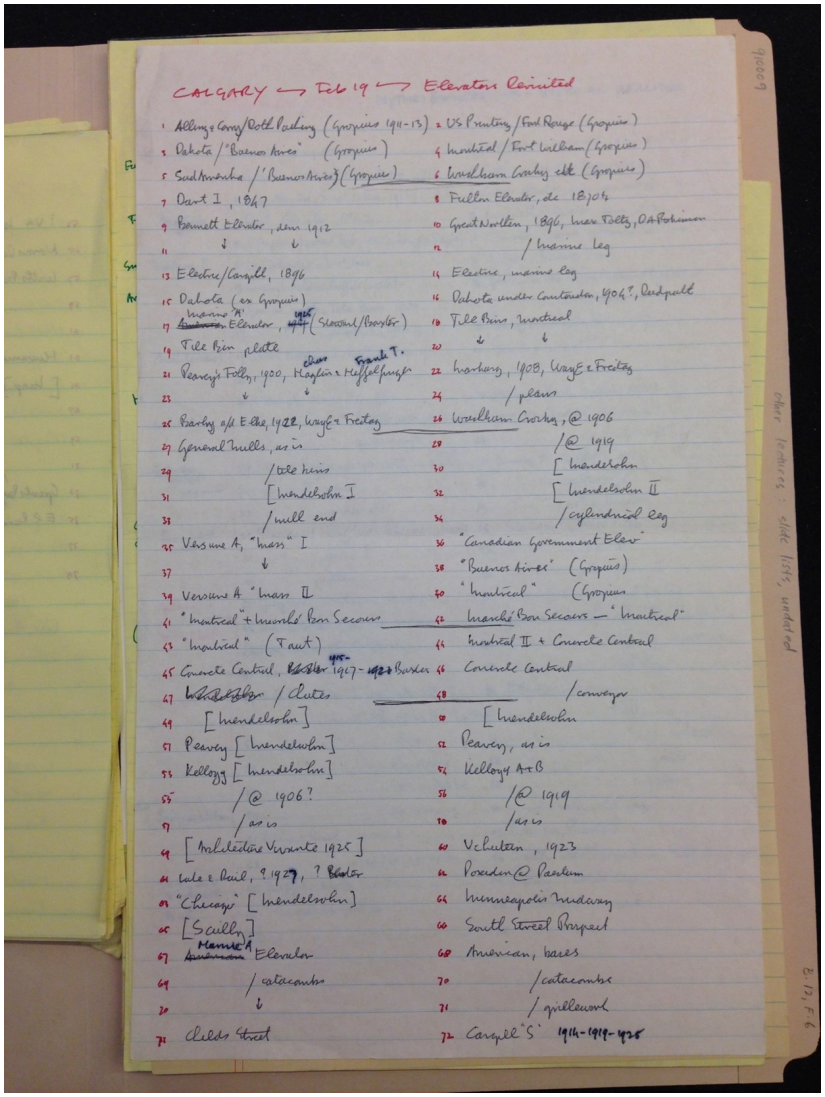


Figure 4.13. Reyner Banham, 'Calgary, Feb 19. Elevators Revisited' (unpublished lecture slide list), Reyner Banham papers 91009, Box 13, Folder 6, Getty Research Institute.

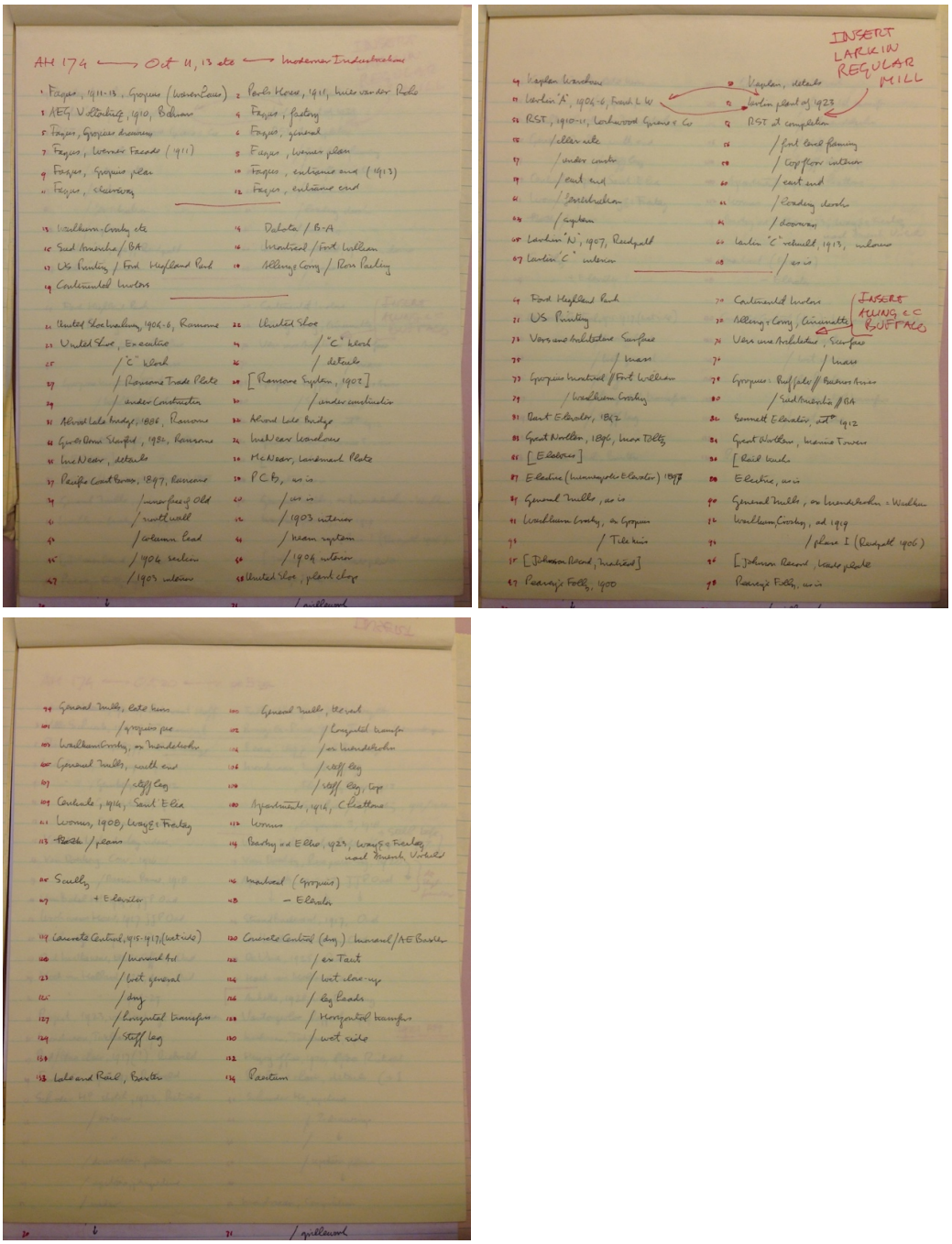


Figure 4.14. Reyner Banham 'AH174- Oct 11, 13, *Moderner Industriebau*' (unpublished lecture slide list), Reyner Banham papers 91009, Box 13, Folder 6, Getty Research Institute.

4.2.2 Double projection

These slide lists anticipated projection and, in Banham's case, performed as the lecture's script. In order to visualise Banham's projection method – and therefore to understand where Banham's interpretation of the buildings comes from and

how it was experienced – I re-enacted excerpts of these slide lists in two projection performances following the same methodology as the one presented in the previous chapter.[21] The first event took place as part of a lecture entitled 'If we can have the first slide and the lights off' (drawing upon Banham's opening sentence when lecturing), and delivered at the Architectural Association in London on 9 May 2017. And the second, 'Lights off, projector on, first slide please', was performed at the CCA in Montreal as part of the event *Talking Pictures: A Circuit* on 14 October 2017. While the first event's purpose was to use the lecture as the platform to draw attention to Banham's lecturing method through double projection and to produce and reproduce Banham's slides for the first time since his death,[22] the second performance revisited the previous one and staged a projection sequence which, with a few accompanying statements, made evident Banham's approach and interpretation of the elevators through projection, whereby the detail made sense when projected next to the general view, and the general view from the early twentieth century made sense when projected next to the general view as per Banham's photograph.[23] Importantly, these performances enabled the experience of the spatial, temporal, ephemeral nature of the events as characterised by the aspect ratio of the 35mm slide, by its colour definition; and the experience of the nature of double projection as Banham's tool of criticism. All photographs became flickering images to be kept in one's memory. Projection also presented Banham's 'as is', 'general view' and 'detail' clearly and made evident the temporal and scalar comparison that is

[21] The difference here, however, is that Banham's slide lists do not contain photographic thumbnails. The lecture therefore entailed a process of reconstruction based on all slide lists, slides and publications. Images were selected on the basis of their description in the slide lists, but also for their coherence with the sequence and the argument being made. In that sense they are not re-enactments but my interpretation of what the lecture might have been like.

[22] It is important to mention that in this case the reproduction of the 35mm slides was only possible with the help of Valerie Bennet and Byron Blakeley, photo-librarians of the AA Photo Library, who very generously supported this project. Due to the impossibility of projecting Banham's original slides (as they are now archival material), the AA Photo Library purchased a slide copier – Bowens Illumitrans – to be able to reproduce analogously and through Kodachrome film Banham's slides as faithfully as possible.

[23] Lecture and performance, 'If we can have the first slide and the lights off' at Architectural Association School of Architecture, 9 May 2017: https://www.youtube.com/watch?v=Bjxl7QTJDXE (accessed 9 July 2018). *Talking Pictures: A circuit*: https://www.cca.qc.ca/en/events/51292/talking-pictures-a-circuit (accessed 9 July 2018). The latter is also part of a wider research project, *Architecture and/for Photography*, sponsored by the Andrew W. Mellon Foundation.

difficult to perceive when encountering the slides as individual photographic objects in the archive. Projection also evidenced the closeness and distance required to make the photographs – distances that are key in shaping Banham's projection and interpretation method, because scale here is the perspective of the image as Banham was seeing it. The following are some examples where the 'as is' in the shape of a 'general view' is projected next to the modern photographic canon of the elevators, and where the 'general view' is projected next to a 'detail'.



Figure 4.15. Left: temporal comparison. One 'as is' photographs are paired with one historical photographs of the General Mills elevator. Right: one 'general view' is paired with a 'detail' of the Concrete Central elevator. Double projection numbered 40, 41 and 37 of the performance 'Lights off, projector on, first slide please', 14 October 2017, CCA Montreal.

Projection also brought to the fore the importance of these mechanical aspects as seen in the previous image. They were further emphasised – and even monumentalised when compared to a building. 'Details' appear on the same scale as the elevator, as in the case of the Cargill Electric elevator in Buffalo (see Figure 4.15).

Projected slides perform here as enlarged snapshots that, as in the case of the photomurals explored earlier in this thesis, act as a tool of revelation. They are reminders of, for instance, photographer Karl Blossfeldt's photographs of plants

(see Chapter Six).[24] Things too small to be seen, or that are inaccessible as in this case, could be made visible and be large enough to enter the public sphere. However, what keeps it constrained and defines it as 'detail' is the fact that it is being projected next to a 'general view'. In other words, when enlarged the detail retains its identity only because there is an image projected alongside – an object to make reference to, and an object that on the contrary is being miniaturised – so that the 'general view' of the elevator appears minute next to its 'detail' and vice versa. This double projection is therefore staging the flexible reproducibility that characterises photography, its shifting relations of scale as well as the distinct mobility that characterises the images, which in return inform Banham's interpretation of the elevators.

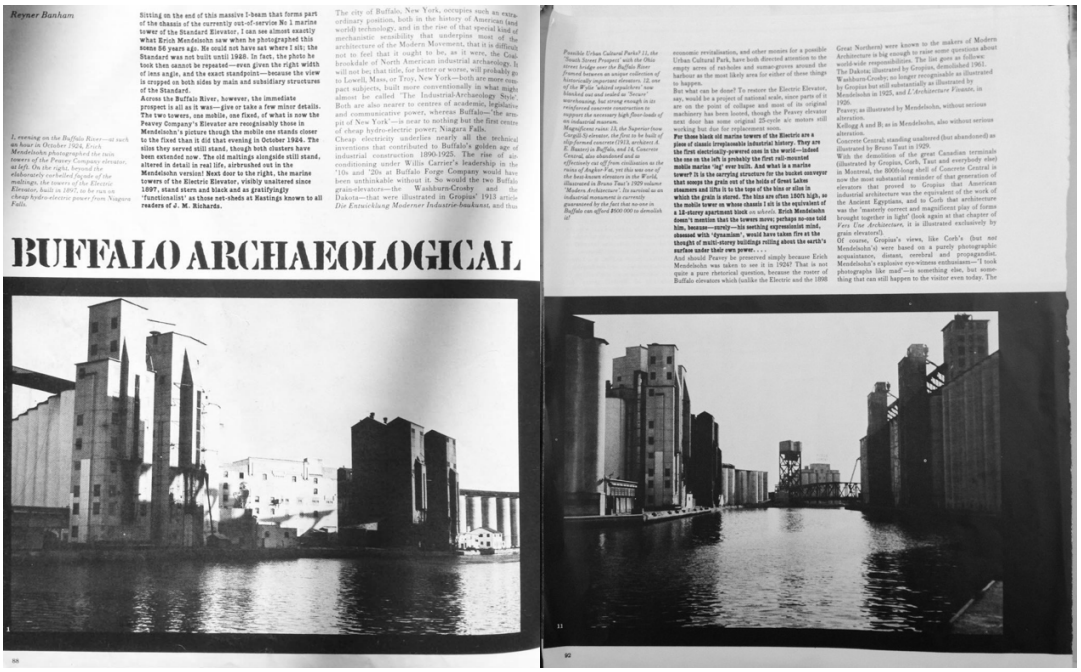
Though highly critical of "architectural historians'" normal procedures of making stylistic comparisons within the standard format of identically dimensioned colour-transparencies',[25] as Banham argued in his inaugural lecture as Professor of Architectural History and Theory at the Bartlett School of Architecture, these slide lists show that Banham found himself using this method to make temporal and even formal (although not stylistic) comparisons, as I will later argue when exploring Banham's use of a detail of the Lake and Rail elevator. In doing so, Banham also reproduced a characteristic early method in which photographs played a determinant role:[26] a comparative pictorial method used by architect

[24] Olivier Lugon, 'Photography and Scale: Projection, Exhibition, Collection', *Art History*, 38.2 (2015), pp. 386–403.
[25] When referring to Heinrich Wölfflin's 'formalist' methods of comparison aided by double projection in the early twentieth century, Banham read: 'I find this kind of instant stylistic juxtaposition increasingly suspect when applied to architecture. In painting, it does not bother me. Leonardo's *Gioconda* and Raphael's *Fornarina*, being portable art-works, could be hung side by side for comparison. So there is no falsity in exhibiting slides or photographs of them side by side and making academic capital out of it. But for La Fornarina substitute the Fanrnesina Palace by Raphael's pupil, Baldessare Peruzzi, and for la Gioconda substitute, say – because it is also in France and connected with Leonardo da Vinci – the Chateau de Chambord, and you have a juxtaposition which is a historical nonsense because it is a physical nonsense … Putting them side by side falsifies them both by giving them a fictitious common context': Reyner Banham, 'At Shoo-Fly Landing (architecture is that which changes land-use)', inaugural Lecture at the Bartlett School of Architecture (undated manuscript), published as 'The Historian on the Pier', *New Society*, 17.433 (14 January 1971), p. 67.
[26] For a compact history of pictorial comparison, see Martino Stierli, *Las Vegas in the Rearview Mirror: The City in Theory, Photography and Film* (Los Angeles: Getty Research Institute, 2013), pp. 223–27.

and critic Paul Schultze-Naumburg in his 1901–1917 *Kulturarbeiten* (Works of Culture) whose purpose was to place 'good' and 'bad' or, in Schultze-Naumburg's words, the 'example' and the 'counterexample' next to each other. This method was also used by architect Hendrik Petrus Berlage in *Grundlagen und Entwicklung der Architektur (Foundation and Development of Architecture)* in 1908 when he compared Renaissance with modern buildings to demonstrate the aesthetic inferiority of the latter.[27] By aiming to create new visual judgements of familiar objects, these juxtapositions aimed to discredit modernity by placing it next to the superiority of the historical.[28] Yet it was Ernst Gombrich who suggested that the double slide image originated with Wölfflin's comparative approach, thus suggesting that it is the classical and the baroque that is the latent opposition.[29] However, in Banham's case, as will be demonstrated throughout the chapter, the double projection aimed to discredit the modern interpretation in favour of his 'contemporary' one – what he denominated as the 'as is'. In other words, through double projection the 'as is' ratified Banham's authority as the critic.

Double projection will furthermore be the means of demonstrating how 'details' projected next to the context where they come from – the 'general views' – testify to a mechanical and industrialised understanding of the elevators. Yet this comparative method was initially suggested through publication.

[27] Among other authors to use this method of pictorial comparison was Theodor Fischer, *Heimatschutzbewegung* (1903). See Stierli, *Las Vegas*, pp. 223–27.
[28] Stierli, *Las Vegas*, pp. 223–27.
[29] Ernst Hans Gombrich, *Art and Illusion: A Study in the Pscychology of Pictorial Representation* (London: Phaidon Press, 1960); and Ernst Hans Gombrich, *The Image and the Eye: Further Studies in the Psychology of Pictorial Representation* (Oxford: Phaidon, 1982). See also Marshall Brown, 'The Classic is the Baroque: On the Principle of Wölfflin's Art Theory', *Critical Inquiry*, 9.2 (1982), pp. 379–404.



Reyner Banham

Sitting on the end of this massive I-beam that forms part of the chassis of the currently out-of-service No 1 marine tower of the Standard Elevator, I can see almost exactly what Erich Mendelsohn saw when he photographed this scene 56 years ago. He could not have sat where I sit; the Standard was not built until 1925. In fact, the photo he took then cannot be repeated—even given the right width of lens angle, and the exact standpoint—because the view is cropped on both sides by main and subsidiary structures of the Standard.

Across the Buffalo River, however, the immediate prospect is all as it was—give or take a few minor details. The two towers, one mobile, one fixed, of what is now the Peavey Company's Elevator are recognisably those in Mendelsohn's picture though the mobile one stands closer to the fixed than it did that evening in October 1964. The silos they served still stand, though both clusters have been extended now. The old mattings alongside still stand, altered in detail in real life, airbrushed out in the Mendelsohn version! Next door to the right, the marine towers of the Electric Elevator, visibly unaltered since 1897, stand stern and black and as gratifyingly 'functionalist' as those net-sheds at Hastings known to all readers of *J. M. Richards.*

The city of Buffalo, New York, occupies such an extraordinary position, both in the history of American (and world) technology, and in the rise of that special kind of mechanistic sensibility that underpins most of the architecture of the Modern Movement, that it is difficult not to feel that it ought to be, as it were, the Coalbrookdale of North American industrial archaeology. It will not be; that title, for better or worse, will probably go to Lowell, Mass, or Troy, New York—both are more compact subjects, built more conventionally in what might almost be called 'The Industrial-Archaeology Style'. Both are also nearer to centres of academic, legislative and communicative power, whereas Buffalo—'the armpit of New York'—is near to nothing but the first centre of cheap hydro-electric power; Niagara Falls.

Cheap electricity underlies nearly all the technical inventions that contributed to Buffalo's golden age of industrial construction 1890-1925. The rise of air-conditioning under Willis Carrier's leadership in the '10s and '20s at Buffalo Forge Company would have been unthinkable without it. So would the two Buffalo grain-elevators—the Washburn-Crosby and the Dakota—that were illustrated in Gropius' 1913 article *Die Entwicklung Moderner Industrie-baukunst*, and thus

BUFFALO ARCHAEOLOGICAL

I, evening on the Buffalo River—at such an hour in October 1964, Erich Mendelsohn photographed the twin towers of the Peavey Company elevator, at left. On the right, beyond the elaborately corbelled façade of the mattings, the towers of the Electric Elevator, built in 1897, to be run on cheap hydro-electric power from Niagara Falls.

economic revitalisation, and other monies for a possible Urban Cultural Park, have both directed attention to the empty acres of rat-holes and sumac-grown around the harbour as the most likely area for either of these things to happen.

But what can be done? To restore the Electric Elevator, say, would be a project of national scale, since parts of it are on the point of collapse and most of its original machinery has been looted, though the Peavey elevator next door has some original 25-cycle a/c motors still working but due for replacement soon.

For those black old marine towers of the Electric are a piece of classic irreplaceable industrial history. They are the first electrically-powered ones in the world—indeed the one on the left is probably the first rail-mounted mobile marine 'rig' ever built. And what is a marine tower? It is the carrying structure for the basket conveyor that sweeps the grain out of the holds of Great Lakes steamers and lifts it to the tops of the bins or silos in which the grain is stored. The bins are often 180ft high, so the mobile tower on whose chassis I sit is the equivalent of a 18-storey apartment block on wheels. **Erich Mendelsohn doesn't mention that the towers move; perhaps no-one told him, because—surely—his seething expressionist mind, obsessed with 'dynamism', would have taken fire at the thought of multi-storey buildings rolling about the earth's surface under their own power. . . .**

And should Peavey be preserved simply because Erich Mendelsohn was taken to see it in 1924? That is not quite a pure rhetorical question, because the roster of Buffalo elevators which (unlike the Electric and the 1898 Great Northern) were known to the makers of Modern Architecture is big enough to raise some questions about world-wide responsibilities. The list goes as follows:

The Dakota; illustrated by Gropius, demolished 1961.

Washburn-Crosby; no longer recognisable as illustrated by Gropius but still substantially as illustrated by Mendelsohn in 1925, and *L'Architecture Vivante*, in 1926.

Peavey; as illustrated by Mendelsohn, without serious alteration.

Kellogg A and B; as in Mendelsohn, also without serious alteration.

Concrete Central; standing unaltered (but abandoned) as illustrated by Bruno Taut in 1929.

With the demolition of the great Canadian terminals (illustrated by Gropius, Corb, Taut and everybody else) in Montreal, the 8000-long shell of Concrete Central is now the most substantial reminder of that generation of elevators that proved to Gropius that American industrial architecture was the equivalent of the work of the Ancient Egyptians, and to Corb that architecture was the 'masterly correct and magnificent play of forms brought together in light' (look again at that chapter of *Vers Une Architecture*, it is illustrated exclusively by grain elevators!).

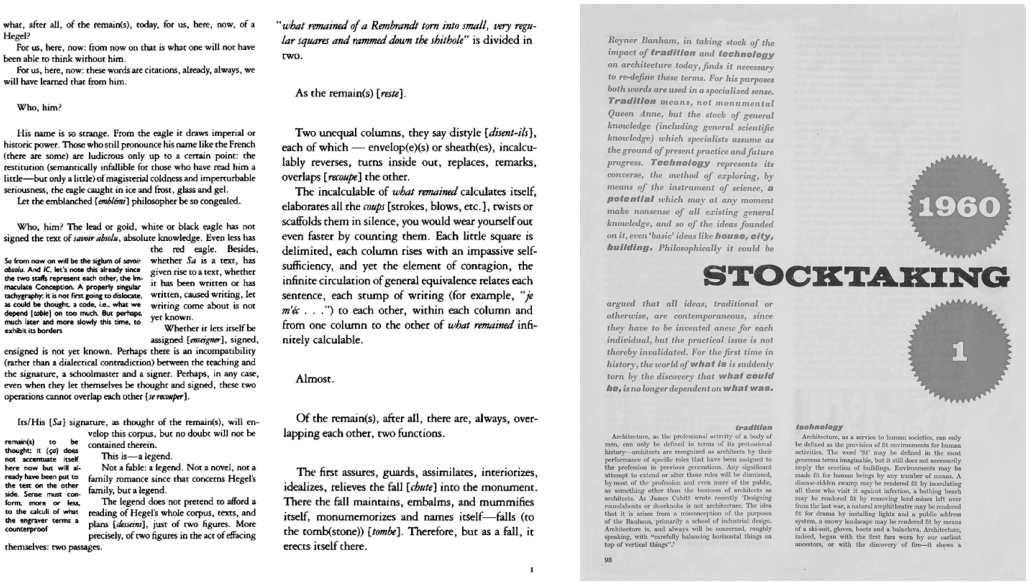
Of course, Gropius's views, like Corb's (but not Mendelsohn's) were based on a purely photographic acquaintance, distant, cerebral and propagandist. Mendelsohn's explosive eye-witness enthusiasm—'I took photographs like mad'—is something else, but something that can still happen to the visitor even today. The

Figure 4.16. Banham's subjective encounter narrated in bold, Banham's objective account in plain font and on the right. Reyner Banham, 'Buffalo Archaeological', *The Architectural Review*, 167.995 (February 1980), p. 88.

In 'Buffalo Archaeological' Banham compares himself to Mendelsohn – both visited the elevators in Buffalo and both photographed them. This comparison is brought to the fore in the article's double column layout (see Figure 4.16). In one column, Banham describes in a very vivid and informal tone what he was seeing, and why Mendelsohn could not have seen what Banham did. In the other, with a more academic tone, Banham describes the elevators as monumental survivors and industrial ruins, briefly narrates the history of their demise, and pleads for their conservation. So, while one column is concerned with a subjective encounter, the other is concerned with an objective elaboration. Nevertheless, the columns speak to one another. In words, one describes the elevators 'as is' and how the 'as is' could not be understood without what the column next describes, and vice versa. Why would Buffalo's industrial demise be of interest if its history did not have that weight and importance in the early days of modernism?

This comparative method shaped Banham's return. In a structure of a double column, Banham 'dialogues' with Mendelsohn. This duality in the article's layout

is similar to Derrida's *Glas* (1986), in which the two columns respond to Hegel's philosophical works on the one hand, and to Jean Genet's autobiographical writings on the other, thereby reconstituting one to the other by destabilising both when facing them against each other (see Figure 4.17).[30] Banham's 'Stocktaking' is another example. The article was part of a set of inquiries that Banham had initiated for the *Architectural Review* under the title 'Architecture after 1960'. In 'Stocktaking', once again one column confronts the other; in this case, tradition is confronted with technology (see Figure 4.18). But more clearly, the double column in Banham's 'Buffalo Archaeological' acts as an allegory of Banham's method of double projection whereby one image speaks to the other, and which, while trying to destabilise it, is at the same time redefining it in formal terms – an interpretation that Banham overtly tries to avoid.



what, after all, of the remain(s), today, for us, here, now, of a Hegel?

For us, here, now: from now on that is what one will not have been able to think without him.

For us, here, now: these words are citations, already, always, we will have learned that from him.

Who, him?

His name is so strange. From the eagle it draws imperial or historic power. Those who still pronounce his name like the French (there are some) are ludicrous only up to a certain point: the restitution (semantically infallible for those who have read him a little—but only a little) of magisterial coldness and imperturbable seriousness, the eagle caught in ice and frost, glass and gel.

Let the emblanched [*emblème*] philosopher be so congealed.

Who, him? The lead or gold, white or black eagle has not signed the text of *savoir absolu*, absolute knowledge. Even less has the red eagle. Besides, whether *Sa* is a text, has given rise to a text, whether it has been written or has written, caused writing, let writing come about is not yet known.

So from now on will be the sigium of savoir absolu. And IC, let's note this already since the two staffs represent each other, the Immaculate Conception. A properly singular cachygraphy: it is not first going to dislocate, as could be thought, a code, i.e., what we depend [table] on too much. But perhaps, much later and more slowly this time, to exhibit its borders

Whether it lets itself be assigned [*enseigner*], signed, ensigned is not yet known. Perhaps there is an incompatibility (rather than a dialectical contradiction) between the teaching and the signature, a schoolmaster and a signer. Perhaps, in any case, even when they let themselves be thought and signed, these two operations cannot overlap each other [*se recuper*].

Its/His [*Sa*] signature, as thought of the remain(s), will envelop this corpus, but no doubt will not be contained therein.

remain(s) to be thought: it (ça) does not accentuate itself here now but will already have been put to the test on the other side. Sense must conform, more or less, to the calculi of what the engraver terms a counterproof

This is—a legend.

Not a fable: a legend. Not a novel, not a family romance since that concerns Hegel's family, but a legend.

The legend does not pretend to afford a reading of Hegel's whole corpus, texts, and plans [*desseins*], just of two figures. More precisely, of two figures in the act of efficing themselves: two passages.

"*what remained of a Rembrandt torn into small, very regular squares and rammed down the shithole*" is divided in two.

As the remain(s) [*reste*].

Two unequal columns, they say distyle [*dient-ils*], each of which — envelop(e)(s) or sheath(es), incalculably reverses, turns inside out, replaces, remarks, overlaps [*recoupe*] the other.

The incalculable of *what remained* calculates itself, elaborates all the *coups* [strokes, blows, etc.], twists or scaffolds them in silence, you would wear yourself out even faster by counting them. Each little square is delimited, each column rises with an impassive self-sufficiency, and yet the element of contagion, the infinite circulation of general equivalence relates each sentence, each stump of writing (for example, "*je m'ée* . . .") to each other, within each column and from one column to the other of *what remained* infinitely calculable.

Almost.

Of the remain(s), after all, there are, always, overlapping each other, two functions.

The first assures, guards, assimilates, interiorizes, idealizes, relieves the fall [*chute*] into the monument. There the fall maintains, embalms, and mummifies itself, monumemorizes and names itself—falls (to the tomb(stone)) [*tombe*]. Therefore, but as a fall, it erects itself there.

Reyner Banham, in taking stock of the impact of ***tradition*** *and* ***technology*** *on architecture today, finds it necessary to re-define these terms. For his purposes both words are used in a specialized sense.* ***Tradition*** *means, not monumental Queen Anne, but the stock of general knowledge (including general scientific knowledge) which specialists assume as the ground of present practice and future progress.* ***Technology*** *represents its converse, the method of exploring, by means of the instrument of science, a* ***potential*** *which may at any moment make nonsense of all existing general knowledge, and so of the ideas founded on it, even 'basic' ideas like* ***house, city, building.*** *Philosophically it could be*

1960

STOCKTAKING

1

argued that all ideas, traditional or otherwise, are contemporaneous, since they have to be invented anew for each individual, but the practical issue is not thereby invalidated. For the first time in history, the world of ***what is*** *is suddenly torn by the discovery that* ***what could be,*** *is no longer dependent on* ***what was.***

tradition

Architecture, as the professional activity of a body of men, can only be defined in terms of its professional history—architects are recognized as architects by their performance of specific roles that have been assigned to the profession in previous generations. Any significant attempt to extend or alter those roles will be dismissed, by most of the profession and even more of the public, as something other than the business of architects as architects. As James Cubitt wrote recently 'Designing roundabouts or doorknobs is not architecture. The idea that it is arises from a misconception of the purposes of the Bauhaus, primarily a school of industrial design. Architecture is, and always will be concerned, roughly speaking, with "carefully balancing horizontal things on top of vertical things".'

technology

Architecture, as a service to human societies, can only be defined as the provision of fit environments for human activities. The word 'fit' may be defined in the most generous terms imaginable, but it still does not necessarily imply the erection of buildings. Environments may be made fit for human beings by any number of means. A disease-ridden swamp may be rendered fit by inoculating all those who visit it against infection, a bathing beach may be rendered fit by removing land-mines left over from the last war, a natural amphitheatre may be rendered fit for drama by installing lights and a public address system, a snowy landscape may be rendered fit by means of a ski-suit, gloves, boots and a balaclava. Architecture, indeed, began with the first furs worn by our earliest ancestors, or with the discovery of fire—it shows a

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Figure 4.17 (left). Jacques Derrida, *Glas*, trans. John P. Leavey Jr and Richard Rand (Lincoln, NE, and London: University of Nebraska Press, [1974] 1986), p. 1.
Figure 4.18 (right). Reyner Banham, 'Stocktaking', *Architectural Review*, 127:756 (February 1960), pp. 93–100.

[30] Jacques Derrida, *Glas*, trans. John P. Leavey Jr and Richard Rand (Lincoln, NE, and London: University of Nebraska Press, [1974] 1986).

4.2.3 'As is'

The 'as is', the 'general view', and the 'detail' are three concepts used by Banham in his slide lists that unveil his historical and comparative method of interpretation of the elevators. The 'as is' ratifies his description of himself as an 'observational historian'[31] who took pride in only talking about buildings that he visited and thus photographed.[32] 'I have been there and seen for myself and that is my license to speak', Banham stated.[33] 'As is' responded to photographs, a product of his first-hand encounter with the buildings. He usually projected them next to an early twentieth-century photo-reproduction used by Gropius as a means to dismantle the elevators' idealised aesthetic as 'art-object'.

The 'as is' is also a synonym for what in his 1982 book *Scenes in America Deserta* he coined as the 'real':

> It had never occurred to me that other people's experiences of natural beauty would be significantly different from my own: not only because we would all be in unquestioned agreement (near enough) about what was naturally beautiful, but that they – like me – would have seen it all in pictorial representation before they ever consciously attended to it in 'the real;' and that the enjoyment of natural beauty in the world was a pleasure of recognising that which one had taught to be beautiful.[34]

The 'as is' is also a 'real' to which not only Banham as an architectural historian was drawn to, but also many others outside the architectural field. This is also the case of artistic practices that involved the avant-gardes, though trying to break with the past, 'turn[ing] to past paradigms to open-up present

[31] Reyner Banham, 'A set of actual Monuments: An inaugural lecture which was not delivered on Monday, February 8th, 1988 at the Institute of Fine Arts, New York University', unpublished manuscript, Reyner Banham papers, Getty Research Institute, Box 12, Folder 1.
[32] 'I've seen thus I've photographed' comes from Briony Fehr's description of Adrian Forty's slide collection in Iain Borden, Murray Fraser and Barbara Penner (eds), *Forty Ways to Think about Architecture: Architectural History and Theory Today* (Hoboken: John Wiley & Sons, 2014).
[33] Quoted in Nigel Whiteley, *Reyner Banham: Historian of the Immediate Present* (Cambridge, MA: MIT Press, 2002), p. 400.
[34] Reyner Banham, *Scenes in America Deserta* (Cambridge, MA, and London: MIT Press, 1989), p. 212.

possibilities.'[35] Banham's comparative history through projection was, in other words, a visual method to compare the 'real' and the 'ideal'. The 'real' was manifested through his own photographs, and the 'ideal' was seen through the eyes of the modern photographic reproductions. 'Who would be truly richer', Banham wrote, 'one who possessed photographs of every surviving building of the classical world, or Sir John Soane, who had measured every stone of the orders of the colosseum and could quote its intercolumniation even in his old age?'[36] This claim responded to his early observations on how photography led to a false construction of architecture, as manifested in his early article 'Photography' from 1953,[37] and leads to the argument that Banham's 'as is' is his attempt to circumvent or re-situate photography, which is, at the same time, a means of destabilising the modern canon.

4.2.4 'general view' and 'detail'

The two other categorisations that appear in Banham's slide lists are the 'general view' and the 'detail'. For these two categories, slides 97 and 98 from the '*Moderner Industriebau*' slide list serve as illustrations. They correspond to 'Peavey's Folly 1900' – 'Peavey's Folly "as is"'. Whereas slide 97 is a photographic representation from 1900, slide 98 is a photograph shot by Banham when encountering the structure in the 1980s. Similarly, slides 87 and 88 show the electric elevator in 1897 and 'as is' (see Figure 4.14). It is interesting to note that with the 'as is' Banham does not overcome photography but rather supplies new photographic images that he then seems to claim are more authentic or more 'real'.

As in the case of the 'as is', the 'general view' and the 'detail' appear repeatedly. However, for the case of the 'general view' and the 'detail', sometimes one is

[35] Hal Foster, *The Return of the Real: The Avant-Garde at the End of the Century* (Cambridge, MA, and London: MIT Press, 1996), p. xi.
[36] Reyner Banham, 'Photography', *Architectural Review*, October 1953, p. 261.
[37] Banham, 'Photography', pp. 259–61.

projected next to the other, sometimes the 'general view' acts as the anchor image in one projector while the other projector sequentially projects images of the elevator that start from distant views and end with a 'detail', or sometimes one is paired with a more generic 'as is'. For instance, slide 101 from the same slide list is a projection of the General Mills elevator as reproduced by Gropius, and slide 102 projected alongside is one of Banham's snapshots of the horizontal transfers of the General Mills elevator (see Figure 4.14) – an 'as is'. Slides 25 and 26 correspond to United Show Factor by Ransome provide another example: slide 25 corresponds to a slide from Block 'C', and slide 26 corresponds to a 'detail'.

Besides staging a comparison between 'general views' of the elevators through photo-reproductions in the early twentieth century and as seen by Banham in the late twentieth century, another of the purposes of the 'general views' is to demonstrate the long history of typological alterations and developments that the elevators had been subjected to, as Banham explains in *A Concrete Atlantis*. Against Gropius's reading of the elevators, Banham argues that these platonic forms could only be the result of typological (and therefore technological) developments, as illustrated by, for example, photographs of the exterior of the General Mills (formerly Washburn Crosby) from different time periods (see Figure 4.19):[38]

> [the] sensational advances in both construction technique and conceptual attitudes [evident in] what had formerly been a strictly cylindrical form of construction of both limited and limiting capability became a far more flexible and adaptable instrument of spatial enclosure. Further evidence of this can be seen by examining the rest of this 'façade'.[39]

Another example is the 'confusing cylinders' of the IMC (St Anthony 30) Elevator in Minneapolis. Banham argues that, although the first-hand experience of them is one of the 'beautiful forms, the most beautiful forms' as praised by Le

[38] These are the photograph used by Gropius in the 1913 *Jahrbuch des Deutschen Werkbundes*, the 1918 photograph used in *The Industrial Empire of Niagara*, a photograph by Erich Mendelsohn from 1924, and a photograph by Patricia Bazelon of the Washburn Crosby in its (then) present state that replicates the same viewpoint as the historical one.
[39] Banham, *Concrete Atlantis*, p. 148.

Corbusier, what this elevator's bizarre appearance instead corroborates is the determinant moment in the 1890s of the transition between the phase of brick cylindrical base construction and the concrete phase (see Figure 4.20).



Figure 4.19. General Mills elevator. B.2/304, B.2/303, B.2/142, B.2/143. Source: Architectural Association Photo-Library.

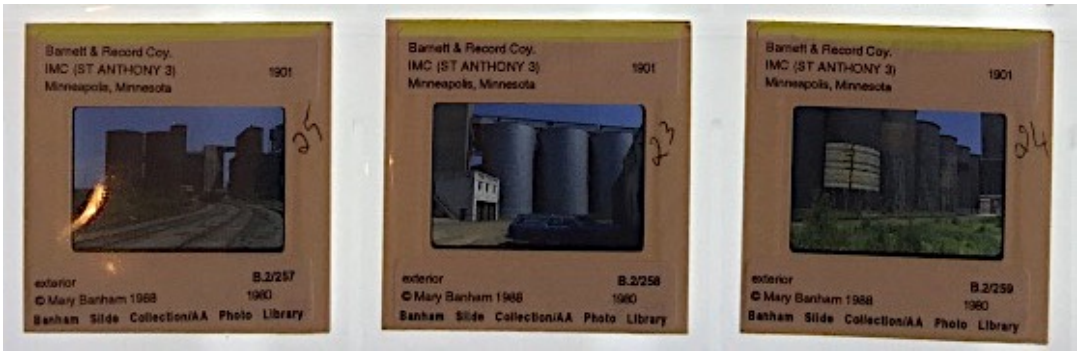


Figure 4.20. IMC Elevator, Minneapolis. B.2/257, B.2/258, B.2/259. Source: Architectural Association Photo-Library.

In contrast to the 'general views', the 'detail' focuses instead on the elevator's stiff legs, horizontal transfers and bin-bottoms as the key working mechanisms that differentiate and contest the modern interpretation of the elevator that has ignored or overlooked such mechanisms. As Banham explains in *A Concrete*

Atlantis, the 'stiff legs' were a key development in the 1890s as they ensured a more efficient handling of grain (see Figure 4.21), and they differentiated a silo from an elevator. As a mechanical development, they were used

> to drag loose grain across the floor of the ship's hold and into the jaws of the conveyor. This complete, independently powered assembly, if contained in a building of its own, was (and still is, where it survives) identified as a 'marine tower' or more familiarly as a 'leg'; in Buffalo at least, it was known as a 'stiff' leg if permanently built into the storage structure or a 'loose' leg if movable...

More importantly, Banham continues:

> the fact that this image is so much less familiar – to architects in particular – than that of a massive storage structure standing on the water's edge or isolated in the wastes of a flat prairie landscape is the consequence of another, and almost completely separate, story of structural and mechanical development, which eventually gave to European modernists the set of admired images they tended to describe rather indiscriminately as 'elevators' or 'silos.'[40]



Figure 4.21. Stiff and mobile legs in the General Mills Elevator on the left (B.2/133) and in the Peavey Company elevator on the right (B.2/055). Source: Architectural Association Photo-Library.

Together, the 'legs' and the horizontal transfers were the means to increase the productivity in the handling and transporting of the grain by overcoming previous limitations and developing fitting mechanical solutions. These 'details' are the visual support for Banham's and Charney's argument that 'what makes an

[40] Banham, *Concrete Atlantis*, p. 111.

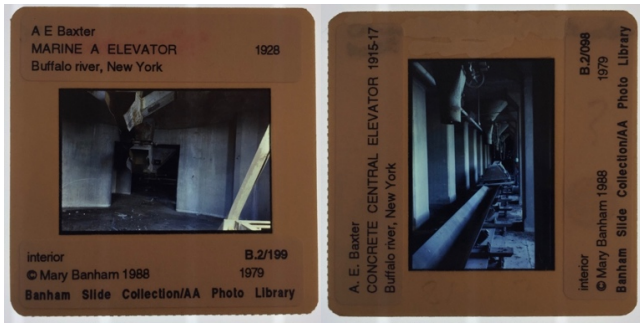
elevator an elevator is not that it occupies a particular building form, but that it has machinery for raising the grain to the top of the storage vessels' (see Figure 4.22).[41]

The third detail, the bin-bottoms, reinforces this understanding. Banham photographed them in the Concrete Central elevator, in the Marine A elevator (see Figure 4.23), and in the Great Northern.[42] These also appear in *A Concrete Atlantis.* One was photographed by Bazelon, the other by Banham; the left slide in image 131. In this case, these 35mm slides portray

> bins that do not come down to the ground; the chassis supports their deep conical bottoms well above an open floor, and from their bottoms extend tubular chutes that can be swivelled to discharge into pits in the floor, from which internal lofting legs carry the grain to the top of the headworks, whence it can be redistributed to other bins during blending operations.[43]



4.22.



4.23

Figure 4.22. Horizontal transfers in the Concrete Central elevator (B.2/111). Source: Architectural Association Photo-Library.
Figure 4.23. Bin-bottoms in the Marine A elevator (left – B.2/199) and Concrete Central elevator (right – B.2/098). Source: Architectural Association Photo-Library.

These photographs of 'details' made it possible for Banham to understand the mechanical developments that made effective the industrial handling of the grain in the late nineteenth and early twentieth centuries, a development that responded to the early capitalist demands of the time and that allowed a reading

[41] Banham, *Concrete Atlantis*, p. 109.
[42] This time re-photographed by Patricia Bazelon for *A Concrete Atlantis*.
[43] Banham, *Concrete Atlantis*, p. 121.

of the elevators as process rather than as form. The attention to 'details' expressed a renewed process of signification; Banham could articulate meanings that were already there, but which had been systematically ignored because of the formal predispositions of architects.[44]



Figure 4.24. Detail of the mobile legs of the Concrete Central elevator projected next to its 'general view'. Double projection numbered 39 of the performance 'Lights off, projector on, first slide please', 14 October 2017, CCA Montreal.

Furthermore, the 'detail' in comparison or in contrast to the 'general view' is what materialises Banham's 'appropriation' of the elevators on the one hand and, on the other, contests their modern interpretation – thereby highlighting the partial and ideologically inclined character of the reception of these buildings, and questioning their canonical status (see Figure 4.24). The slides that depict the elevators' 'details' are the evidence of Banham's knowledge of those 'details' and therefore of the elevators in 'detail'. Yet to understand the 'detail' it is necessary

[44] In contrast to Marco Frascari, for whom the detail allowed the attachment of new meanings to the objects. See Marco Frascari, 'The Tell-The-Tale Detail', in Kate Nesbitt (ed.), *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory, 1965–1991* (New York: Princeton Architectural Press, 1996), p. 500.

to relate it to its whole. Knowing the 'detail' also means being able to know the whole (or to interpret and understand differently the 'general views'). This is something that Banham's double projection enabled. Conversely, it is also something that philosopher and art historian Georges Didi-Huberman points out as a 'paradoxical' operation in art: 'one which only gets you nearer something the better to cut it up, and which only cuts it up the better to deal as a whole. As if the "whole" could exist only in piecemeal form, on condition that the part be totalizable'.[45] Within art history discourses it was the 'detail' that gave Warburg authority and constructed his iconographic method for researching art history. For Banham, this visual method is not only a way of seeing – and thus photographing – but is also a way of describing and thus of knowing: 'seeing in detail would therefore appear to constitute a little organon for all knowledge.'[46]

4.3 The return to the image as form

The previous sections have demonstrated how Banham's distinct photographic criticism emphasises the working nature of the elevators and how the three terms – the 'as is', the 'general view', and the 'detail' – materialised these criticisms through double projection. In his lectures, Banham projected photographs of the elevators' working mechanisms next to photographs of general views. Anthony Vidler argues that Banham was more inclined to historical accuracy than to historicism. The criticism of the elevators demonstrates that Banham was one of the historians who aimed to define early twentieth-century programmes, forms, and styles in such a way as to 'imply possible continuities with the present'.[47]

[45] 'To describe [in detail] means to see well, and that to see well means to see the truth. Since everything can be seen and exhaustively described, everything will be known, verified, and legitimised': Georges Didi-Huberman, 'The art of not describing: Vermeer – the detail and the patch', *History of the Human Sciences*, 2.2 (1989), p. 137.
[46] Didi-Huberman, 'The art of not describing', p. 135.
[47] Anthony Vidler, *Histories of the Immediate Present: Inventing Architectural Modernism.* (Cambridge, MA, and London: MIT Press, 2008), p. 1.

However, I will now illustrate how Banham's use of photographs, both projected and printed, further demonstrate his return to a reading of the elevators as 'art-objects'. This is evident in three different instances. The first is in the isolation of the image from the text in *A Concrete Atlantis*, which prompts a disjunction between the mechanical (as emphasised through words) and the formal (as emphasised through images) – a formal that focuses on the exterior appearance of the elevators and their ruinous physicality devoid of all working mechanisms. The second instance (which leads to the third) is evidenced in two particular sequences of projection in 'Monumentale Industriebau' and 'Elevators Revisited', where a 'detail' from the Lake and Rail elevator directs Banham's attention to the 'detail' as form, and therefore to an aesthetic appreciation of the elevator. And the third instance is what I have called the 'return to the image'. Banham's return to the elevator as 'art-object' implies that there is a return to the photographic canon from which it seems impossible to escape. However, this needs to be further problematised, as this return testifies to one of Banham's longstanding interests in the 'image', of which the elevators serve as an example.

4.3.1 Text vs photographs

Throughout *A Concrete Atlantis*, Banham's own descriptions of the mechanical processes are vivid and thorough in contrast to the static images of the elevators.[48] Banham places the canonical modernist imagery in dialogue with his personal photographs, thereby setting a conflicting dialogue between the actual state of the elevators (as depicted by Banham) with the ideal one (as depicted in the modernist imagery); and he omits descriptive captions that, as in his articles from the 1980s, situate the photographs and the text, albeit sometimes forcefully, in relation to each other (see Section 4.1). By doing this, images are left to speak for themselves. In the photographs Banham took, and that Bazelon later shot under Banham's instructions, the elevators appear as 'massive abstract

[48] See also Steiner, 'The Grain of the image', pp. 117–28.

sculptures with a functional justification', just as in the canonical photographs.[49] These photographs end up performing as autonomous images-objects that contradict Banham's emphasis on the elevators as process by paradoxically reaffirming Gropius's use of photographs and their repeated iteration thereafter. Moreover, the isolation of the photographs from the text enhances the depiction of the elevators as obsolete post-industrial objects, thus positioning Banham's elevators by analogy with mid and late twentieth-century art and photographic discourses, such as those by North American photographer Frank Gohlke who, as in Banham's case, confronted through photography the (then ruinous) industrial buildings whose iconicity had been created by photography.[50]

This also demonstrates that, although Banham argued 'it is the process of which they are an image that is important',[51] he continued to be attracted by the elevators' physicality in an almost compulsive way. As is evident in his photo-library and publications, Banham's focus was primarily on the ruinous state of the elevators. He continuously photographed their obsolete mechanical apparatuses and derelict exteriors (see Figure 4.25). By then, the elevators were abandoned and architectural objects no-longer-in-use, absent of all working mechanisms, whose typological development appears to have frozen in time. They were ruinous structures; the fact that the mechanical elements themselves are stilled and silent tends to produce a formal reading of the elevators.

Benjamin's concept of the ruin as elaborated in *The Origin of German Tragic Drama* (1925) and revisited by Naomi Stead in 2003 is valuable in this respect, because, as Stead explains, Benjamin's ruin 'delves beyond the aesthetic of the ruin as an object, and reads as a process, a means of demystifying and stripping away symbolism ... at the *expense* of romantic aesthetics.'[52] Under this

[49] Michael Stratton, 'A Concrete Atlantis, US Industrial Building and European Modern Architecture 1900-1925', *Journal of the Construction History Society*, 3 (1987), p. 140.
[50] See Frank Gohlke, *Measure of Emptiness: Grain Elevators in the American Landscape* (Baltimore, MD, and London: Johns Hopkins University Press, 1992).
[51] Charney, 'Grain Elevators', pp. 328–31.
[52] Naomi Stead, 'The Value of Ruins: Allegories of Destruction in Benjamin and Speer', *Form/Work: An Interdisciplinary Journal of the Built Environment*, 6 (October 2003), p. 1.

understanding one can argue that Banham's return to the ruin is therefore productive as it contributes to Banham's project in stripping the elevators of all modernist meanings and symbolisms, thereby allowing him to introduce his renewed understanding. However, there is one small but important difference between Stead's argument and the agency of Banham's ruin: Banham does not return to the ruinous elevators as objects so much as agents of demystification. Banham's reading through process, and photographic representation through ruin, demystify the elevators as the Neoplatonic ideal objects that the modernists so much praised, rendering them purely as silos. Yet it is also that emphasis on process– the demise of early capitalism that first brought them to life is also visible in the absence of all labour and working mechanisms – which makes them even more modern while at the same time turns Banham's attention to the ruin and therefore, once again, to the elevator as object.

The 'art-object' that Banham constructs is not Gropius's silo as an empathetic sculptural object that is representative of the 'new industrial building art'. But it is through his choice of photographic accounts that Banham returns to the elevators as 'art-objects'. If photography allows Gropius to focus on the object, in Banham's case it forces a move beyond the object: the elevator as art-object can be constituted as such 'only through the agency of [their photographic] representation'.[53] Unsurprisingly, and shown by Gropius's and Banham's use of them, different modes of the photographic image play a vital role in shaping our industrial imagery and the extent to which we see industrial buildings as art and not as buildings.

[53] Victor Burgin's explanation of the construction of art-objects after conceptual art proves to be useful for understanding the difference between Gropius and Banham: see Burgin, *The End of Art Theory: Criticism and Postmodernity* (Basingstoke and London: McMillan, 1986), p. 38.



Figure 4.25. Reyner Banham's slide sheet with various photographs of the Concrete Central Elevator in Buffalo. Source: Architectural Association Photo-Library.

In Melvin Charney's early line-drawn sections of the elevators, the process of handling and manufacturing grain could be traced – but like Banham, he returned to representing the elevators as solid art-objects empty of their content (see Figure 4.26). In the 1990s he mounted a series of elevators as void sculptures in the gardens of the Canadian Centre for Architecture in Montreal, which emulate the grain elevators sitting in the distant landscape as ruins. Once quotidian and vernacular industrial buildings published in engineering journals, the elevators entered the art and architecture scene when projected by Gropius on the evening of 1911. Positioned as art-objects, they were revisited and originally re-interpreted in the 1970s by Charney and Banham as architectural objects whose processes needed to be acknowledged. Because the elevators

were inaccessible and already out of use, these processes could only be recovered through their own research. But Banham and Charney returned in the 1980s, as if inescapably, to the interpretation of the elevators as art-objects. This might be what Banham already anticipated by describing what he was doing as an 'archaeology' in terms both of his recovery of the buildings' mechanical process and in his later understanding of these ruinous structures as silos. Archaeology here stands for the research of recovering 'process' as a characteristic of the built structures.



Figure 4.26. Silo Allegorical columns. Melvin Charney. Sculpture Garden, Canadian Centre for Architecture, Montreal, 1987–1990. In the far landscape, the ruins of the grain elevator no 5, of the Mill grain elevator, and of their conveyors. Source: photography by author, 2014.

4.3.2 The 'detail' as form

In the final projection sequence of '*Moderner Industriebau'*, Banham draws attention to the Concrete Central elevator through a series of projections of 'general views' and 'details'. He ends by projecting two other images side by side: a detail from the Lake and Rail elevator by Baxter alongside a slide of the Temple of Neptune in the Paestum – a classical structure also mentioned by Banham in 'Elevators Revisited' and in *A Concrete Atlantis* that acts as reminder of the early picturesque visions of ancient sites or of the ruinous and topographic views of Piranesi's etchings.[54] In 'Catacombs of the Modern Movement' Banham provides a description of this detail: 'Classic elevator detailing: the headworks and bin-

[54] Another reason why Banham named his book *A Concrete Atlantis* was probably to allude to the sea-god prompted by the Temple of Neptune: Banham, *Concrete Atlantis*, p. 166.

heads of a regular 1927 elevator. The daily 'lifts' of the slip-form shuttering can be seen as well as patches of spalling where reinforcing bars were too close to the surface.'[55] However, it stands as a formal rather than a technical or constructive comparison when projected next to one of the temples of Paestum. Banham describes this 'detail' as exemplifying the forms that

> those trained at school in the disciplines of classical architecture, that would have been the whole of Gropius and Le Corbusier generation, would surely recognize ... The bins and hail house of the Lake and Rail elevator in Buffalo. The bins rise like unfluted oversized Doric columns to residual capitals at the top of each shaft. Above them, like a lintel or architrave the hail house is panelled out in a regular geometry. With an epic window in the middle of each bay. It isn't quite a Doric frieze of triglyphs and metopes, but it isn't far off.[56]

The architectural discourse of the Paestum has been historically centred on the shift stemming from the declining interest in mathematics of proportions and the rising attention to the effects on the observer of architecture. As an example, the Paestum has stood for debates against the universality and in favour of the subjectivity embedded in any system of proportions – a clear outcome of the beginning of the empiricist tradition whereby the actual experience was highly valued and became crucial in these debates.[57] In *Rediscovering Architecture: Paestum in Eighteenth-Century Architectural Experience and Theory* (2015), art historian Sigrid de Jong argues that what is of importance is how the Paestum is perceived, and that its possible readings are informed and mostly determined by the subjective experience of its encounter, that is, on how the impact of architecture on the beholder became a valuable component of the value and interpretation of the building. It is, therefore, not surprising to see why Banham used these two slides as his conclusion. As an 'observational historian', Banham projected these photographs as evidence of his own experience of the building. He elaborates on a 'detail' that, although responding to a technical requirement, is inevitably stressed as a formal one. The Lake and Rail elevator's 'detail' is,

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[55] Banham, 'Catacombs', p. 45.
[56] Banham, 'Mythical Vernacular Monuments', 16.35 min.
[57] Sigrid de Jong, 'Subjective Proportions: 18th-Century Interpretations of Paestum's "Disproportion"', *Architectural Histories*, 4.1 (2016), 2. DOI:http://doi.org/10.5334/ah.125.

therefore, not only the result of a technical achievement, as he wrote elsewhere, but is also, and more importantly in this context, a formal reading of an industrial building, here informed by classical architecture and by his own subjective experience.

What this reading of the Lake and Rail elevator's detail also brings to the fore is the realisation that Banham was doing the same things for the mechanisms that the modern architects had done for the enclosures: he was reading the elevators through their formal appearance, and aesthetic impression, the characteristic mode of conveying which is the 'detail' photograph. Consequently, 'detail' and 'general view' turn out to be the same thing.

4.3.3 Return to the image

The previous two sections have discussed Banham's returns to the elevator as 'art-object'. However, these returns are symptoms of a broader return to the modernist photographic canon and to the elevators as 'image'. The return to the photographic canon is something that Banham was already indicating since his early article 'Buffalo Archaeological', in which he subjectively described his encounter with the structures to demonstrate why his encounter was different to Mendelsohn's.

In 1924 Mendelsohn captured the elevators as working mechanisms, registering through a set of photographs the mechanical aspects at work. Mendelsohn's photographs depict the 'mountainous silos', full of 'primeval power' and of 'primitive functions of ingesting and spewing out again',[58] something that no other architect had done at the time as none had been able to experience them at first hand. Visible in Banham's slide collection and in 'Buffalo Archaeological' is how Banham's snapshots are a conscious attempt to re-photograph

[58] Erich Mendelsohn, *'Amerika': 82 photographs* (New York: Dover, 1993), p. 45.

Mendelsohn's perspective (as much as to re-photograph Gropius's photo-reproductions); for example, Banham's snapshots of the Kellogg elevator frame Mendelsohn's view. In the opening paragraph of 'Buffalo Archaeological', Banham narrated this photographic comparison:

> Sitting on the end of this massive I-beam that forms part of the chassis of the currently out-of-service No. 1 marine tower of the Standard Elevator, I can see almost exactly what Erich Mendelsohn saw when he photographed this scene 56 years ago. He could not have sat where I sit; the Standard was not built until 1928. In fact, the photo he took then cannot be repeated – even given the right width of lens angle, and the exact standpoint – because the view is cropped on both sides by main and subsidiary structures of the Standard. Across the Buffalo River, however, the immediate prospect is all as it was – give or take a few minor details.[59]

When Mendelsohn visited Buffalo and re-photographed the elevators, he was confronting the 1913 photographic reproductions that Gropius first disseminated. When Banham visited and re-photographed the elevators in Buffalo, he was revisiting Mendelsohn's 1924 photograph (and therefore Gropius's). Mendelsohn was photographing a building as much as a photograph (though probably more the building than the photograph that Gropius first used); Banham was, instead, intentionally re-performing or re-enacting Mendelsohn's, and therefore Gropius's, photographs. Yet Banham cannot escape the ruin.

Banham's return testifies, in more general terms, to the impossibility of detaching from the photographic canon while at the same time revisiting it, both through photography and through his textual accounts where the emphasis is on the elevators as 'process' rather than as 'form', despite the irony that most of the elevators are ruins and no longer worked by the time of Banham's visit. As examined in this chapter, photography provided access to the buildings, while at the same time it was the means to criticise them. I have also argued that Banham's revisiting through photography prompted his return to the 'art-object'.

[59] Banham, 'Buffalo Archaeological', p. 88.

This chapter will now conclude by arguing that the impossibility of detaching from the photographic canon is a product of Banham's notion of the 'image'.

When Banham published the 'The New Brutalism' in 1955, he defined the 'memorability of the image' as one of the tenets of brutalism. He described the 'image' as 'something that is visually valuable, but not necessarily by standards of classical aesthetics ... image may be defined as *quod visum perturbat* – that which seen, affects the emotions.'[60] By doing so, Banham replaced the 'legibility of form', which had been Rudolf Wittkower's plea after the First World War for an architecture with a coherent order, with 'memorability as image'. As a result of postmodernist critiques, the relationship between visible appearance and form was superseded by memorable images that might or might not relate to other aspects of building. The identity of the 'image', as proposed by Banham and explained by Zimmerman, 'inheres in how it looks the way it looks'.[61]

The definition of 'image' is also explained in terms of topology.[62] Furthermore, as John Macarthur elaborates, Banham's 'image' is informed by contemporary studies in art history which tell us that images are 'not defined in their formal properties but rather in their cultural trajectory – their semiotics.[63] This marks one pole of the context of art. The other is the psychology of perception which is ahistorical and trans-cultural.' This last 'pole' implies that the building is 'memorable, striking, as a mental image, and it has a valency in culture such that it is recognised as a single thing against a ground of visual experience. The image

[60] Reyner Banham, 'The New Brutalism', *Architectural Review* 118 (December 1955), p. 354; revised version published as Reyner Banham, *The New Brutalism: Ethic or Aesthetic?* (London: The Architectural Press, 1966), p. 46.
[61] Claire Zimmerman, 'From Legible Form to Memorable Image: Architectural Knowledge from Rudolf Wittkower to Reyner Banham', *Candide. Journal for Architectural Knowledge*, 5 (2012), p. 106.
[62] For Banham's exposition of topology, see Laurent Stalder, '"New Brutalism," "Topology," and "Image:" some remarks on the architectural debates in England around 1950', *Journal of Architecture*, 13.3 (2008), pp. 263–81.
[63] Macarthur, John. 'Brutalism, ugliness and the picturesque object'. In *Formulation Fabrication – The Architecture of History: Proceedings of the Seventeenth Annual Conference of the Society of Architectural Historians*, Australia and New Zealand (2000), pp. 259-66.

is re-cognition, the identification of what we already know, distinguished among other visual percepts.'[64]

However, I want to emphasise how the notion of 'image' is tied to its 'memorability', how it is shaped by its visual experience and how relevant its visual apprehension is. Taking these three aspects into consideration, one cannot but wonder if Banham's return to the elevators was informed by this understanding, which in this case was inextricably bound to the canonical status of the images of the elevators in the first place: it was Banham who pointed out how memorability and mass reproduction of images were intimately connected, so Banham's memorability was clearly related to the repetitions in photography.[65]

Banham's concept of the 'image', in contrast to Wittkower's, suggested that the meaning of the architectural object was independent of other concerns, and thus that the discourse on architecture 'might take shape from free-floating images circulating rapidly in journals, books, and magazines, with a mere nod to building function or context'.[66] Banham's critique needs to be understood under these circumstances, since it emerged from them.

It also has to be further questioned and problematised, for, while the discourse on Banham's use of 'image' somehow remains in the 1950s and 1960s and is mostly tied to the 'New Brutalism', this chapter has demonstrated that it was always present for Banham, since his initial approach to the building structures and ever present in all lectures and publications through his use of images. And what better than a temporal performance such as a lecture (and such as the many Banham delivered) to leave the audience impregnated with a series of repeated and new, memorable images.

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[64] John Macarthur, 'Brutalism, ugliness and the picturesque object', in *Formulation Fabrication – The Architecture of History: Proceedings of the Seventeenth Annual Conference of the Society of Architectural Historians*, Australia and New Zealand (2000). P. 261.
[65] For a further comparison between Wittkower's and Banham's work on photography, see Zimmerman, 'Photography into Building', pp. 270–87.
[66] Zimmerman, 'From Legible Form to Memorable Image', p. 102.

PART II

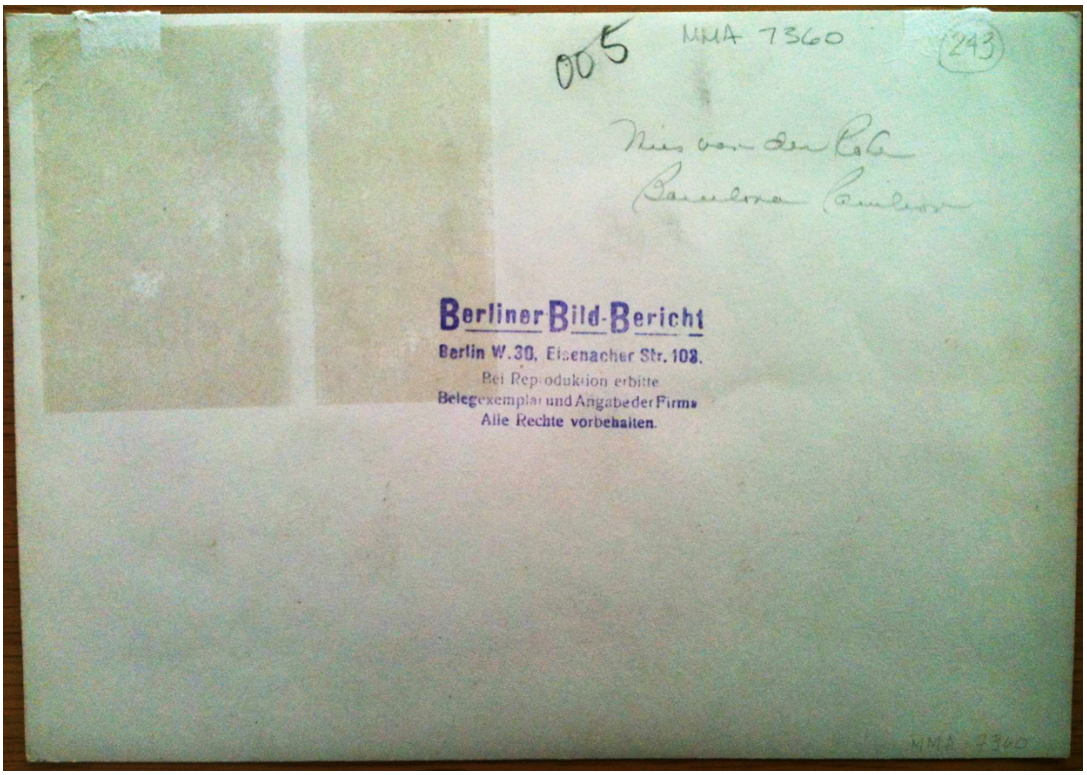


Figure 5.1. Berliner Bild-Bericht stamp on the back of the photograph identified as MMA7360, MoMA, NY.

5

The Berliner Bild-Bericht prints

> The vintage photographs listed (silver gelatin prints) are all about seventeen by twenty-three centimetres. Unless otherwise noted, all prints are glossy … Fifteen views shot on three different occasions after the completion of the pavilion; a few prints are matte (three prints yet to be proved authentic) (All originals large prints destroyed before August 7, 1943 at Lilly Reich's studio, Genthinerstrasse 40, Berlin). The narrow, panorama-like views, only 11.5 centimetres in height (Berlinische Galerie), were cut afterwards by Sergius Ruegenberg.[1]

This is how Rolf Sachsse, German photographer and Mies scholar, describes the existing set of vintage photographs originally shot in 1929 during the short existence of the German Pavilion in Barcelona. Today, these canonical prints are known as the Berliner Bild-Bericht prints due to the blue stamp printed on their backs that credit the interwar Berlin photo agency who first disseminated them (see Figure 5.1). These prints respond to a selection of views not shot by Mies himself, but which were controlled by the architect for repeated publication and dissemination.

[1] See Helmut Reuter, Wolf Tegethoff and Rolf Sachsse, 'Mies and the photographers 1', in Helmut Reuter and Birgit Schulte (eds), *Mies and Modern Living: Interiors, Furniture, Photography* (Ostfildern: Hatje Cantz, 2008), pp. 231, 241–42. Originally published as Helmut Reuter and Birgit Schulte (eds), *Mies und das Neue Wohnen: Räume, Möbel, Photografie* (Ostfildern: Hatje Cantz, 2008).



Figure 5.2. Berliner Bild-Bericht as encountered in MoMA. Photo by author.

Resonating for more than 80 years in histories of modernism, the Berliner Bild-Bericht prints will never be new to anyone who knows the building (see Figure 5.2). The German Pavilion in Barcelona has lived in these images since its dismantling in 1930. Only a few foreign architects, historians and photographers – Nicolás Rubiò i Tudurí and Bruno Taut among them – had been able to experience the building directly.[2] After the building's dismantling, the Berliner Bild-Bericht perpetuated the life of the building. Since the 1930s, almost all surveys of twentieth-century architecture in Europe and America included at least one of these sepia prints as black-and-white photo-reproductions. It is, therefore, unsurprising to see the same set of reproduced images even today. However, although the Berliner Bild-Bericht remain immutable in publication, they also prompt myriad readings of the spatial qualities of the building while projecting specific visual features that have been subject to changing interpretations over the years (see Figure 1.2).[3]

[2] Nicolás Rubiò i Tudurí's published article on the first-hand experience of the Pavilion has been the main account of the 1929 building. See Nicolás Rubiò i Tudurí, 'Le Pavilion de L'Alemagne a L'Exposition de Barcelone', *Cahiers d'Art*, 8-9 (1929), pp. 408–10.

[3] In this respect, the two most relevant sources are architect Juan Pablo Bonta's *An Anatomy of Architectural Interpretation: A Semiotic View of the Criticism of Mies van der Rohe's Barcelona Pavilion* (Barcelona: Gustavo Gili, 1975), which gives a detailed account of these changes, and George Dodds's *Building Desire: On the Barcelona Pavilion* (Oxford: Routledge, 2005), which explores the multiple misinterpretations of the building due to the Berliner Bild-Bericht prints being the only evidence of its built existence.

The Berliner Bild-Bericht photographs have stood for the Pavilion, just as other sets of photographic images did for other Mies projects during the same time period. For instance, a different set of photographs stood for the Tugendhat House while it was impossible to access. Referring to these two examples among others, Beatriz Colomina has argued that this use of photographic media demonstrates the reliance on photography as a means of perception and construction of modern architecture, while it is also evidence of one of Weimar Germany's distinctive characteristics: the circulation of ideas through images.[4] However, the case of the German Pavilion is special: due to the absence of a built referent, the Berliner Bild-Bericht prints have not only represented the building, but they have also substituted for it. They have constructed the experience of the building through the photographs while preserving an aesthetic distance that could not be bridged, distancing what was supposed to have been experienced as materially concrete.[5] Furthermore, given Mies's interest in photography, it is possible to argue that they fostered a distinct experience of the building only, and intentionally, through its photographs.[6]

Within architectural culture, the Berliner Bild-Bericht prints have generally been read as photo-reproductions, and thus as equals with no significant material differences between them. As in the case of the elevators, this derives from their repeated publication and canonical consolidation. They have proved useful for architectural history mostly due to their indexical and representational content, also as in the case of the elevators. Only in the last thirty years have the Berliner Bild-Bericht qualities and characteristics as photographic images attracted scholarly attention and a recognition that they are photographs which hold a material dimension. Sachsse's description is an example of such approach. It evidences their physical existence as archival objects – held in the Berlinische

[4] Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, MA, and London: MIT Press, 1994).
[5] For this argument, see Claire Zimmerman, *Photographic Architecture in the Twentieth Century* (Minneapolis: University of Minnesota Press, 2014).
[6] Among earlier discussions of how photographic images displaced the experience of a building were George Nelson, 'Architects of Europe Today: 7 – Van Der Rohe, Germany', *Pencil Points* (September, 1935), p. 453, and in a review of the 1947 exhibition and a book authored by Philip Johnson, Joseph Rykwert, 'Mies van der Rohe', *The Burlington Magazine*, 91 (August 1949), p. 268.

Galerie – as well as material objects with a distinct materiality – glossy or matte, and varying in size and format.[7] This is mainly due to their archival condition which has allowed this closeness, and which at the same time has fostered a series of original interpretations.

This chapter identifies the Berliner Bild-Bericht as the second example of the 'photographic canon' suggested by this study. It explores the canonical Berliner Bild-Bericht both as photographic prints and as archival material. It investigates the contingency of this canonical status and emphasises the processes of differentiation that have defined its construction. Furthermore, it suggests that the constant search for an 'author' has characterised the history and scholarship of the prints, and that the history and scholarship are symptoms of the prints' canonical status as much as a means for its consolidation. This chapter draws attention to two different moments where this comes across particularly prominently. The first refers to the possibility of the architect as the 'author' of the photographs, and therefore of Mies's use of the photographs as a means to claim authorship in of the architecture. It also concerns the pictorial definition of the architecture as determined by the constraints of the photographic prints. And the second moment illustrates how a renewed search for a 'photographic author' (or for the individual who shot the Berliner Bild-Bericht images) is a consequence of their archival nature. Overall this chapter demonstrates how these photographs have introduced the question of authorship anew.

[7] This research forms part of a wider project published as *Mies and Modern Living: Interiors, Furniture, Photography* (2008) and held at the Henry van de Velde Gesellschaft Institute in Hagen. In the project, the relationship between Mies and the use of photography is highlighted by three of the main German scholars on Mies: Helmut Reuter, Wolf Tegethoff and Rolf Sachsse. See Reuter and Schulte (eds), *Mies and Modern Living*.

5.1 Mies's early control over the Pavilion's images

In *Towards a Philosophy of Photography*, Vilém Flusser argues that the advent of photography has had deep repercussions: due to photography, everything in the world needs to be recorded, controlled and eternally reproduced.[8] This summarises the history of the Berliner Bild-Bericht prints: they are prints that act as a record of a building that existed only for a short period of time, that were controlled by Mies before their initial publication, and that gained a canonical status due to their repeated dissemination.

Mies took control over the Pavilion's photographs at an early point, partially as a response to the potential embedded in forms of commercial image reproduction and dissemination within Weimar Germany, and partially due to his awareness of the use of media as a productive tool. Mies controlled the dissemination and the forms of representation of all his projects, the ideological processes of image construction that preceded their publication, and the publication platforms in which they appear. As Sachsse, Tegethoff and Reuter argue, Mies had control over photographic dissemination as much as over his choice of photographers.[9]

The case of the Berliner Bild-Bericht prints is special in this regard. In this case, the power of photographic reproduction did not deconstruct values of authority, as Walter Benjamin had hoped for; rather, and due to Mies's ideological manipulation preceding the publication of the Berliner Bild-Bericht prints, it reinstated them.[10] Mies limited the reproducible (and therefore repeatable) prints to fifteen. He further controlled the processes of alteration, retouching and modification that the photographs were subjected to by the publishing press of the time, but also probably within his office, that aimed at producing a desired

[8] Vilém Flusser, *Towards a Philosophy of Photography* (Göttingen: European Photography Andreas Muller-Pohle, 1984), p. 7, cited in Andrew Higgott and Timothy Wray, 'Introduction', in Higgott and Wray (eds), *Camera Constructs: Photography, Architecture and the Modern City* (Burlington, VT: Ashgate Publishing Company, 2012), p. 3.
[9] Reuter and Schulte (eds), *Mies and Modern Living*.
[10] For this discussion see: Eduardo Cadava, 'History', in Cadava, *Words of Light: Theses on the Photography of History* (Princeton: Princeton University Press, 1997), p. 4.

image (as the evidence at the Berlinische Galerie in Chapter Six demonstrates). As much as this careful, detailed and subjective control seems to play against the nature of the repeated iterations of the Berliner Bild-Bericht, it was precisely this process of differencing that defined the Pavilion's early appearances within the printed press in its early years (as the 1929–30 publications illustrate) and that guaranteed its perpetuation once the building was absent; and so they did.

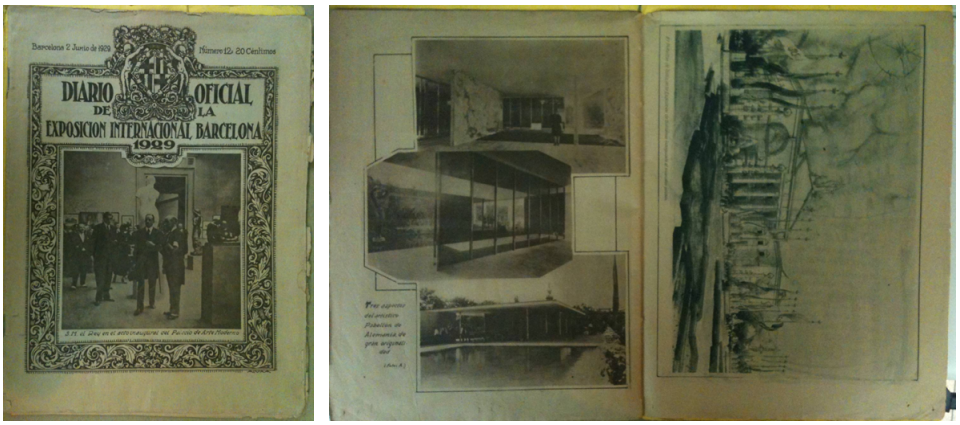
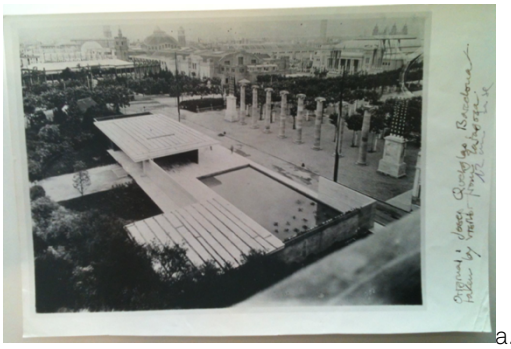
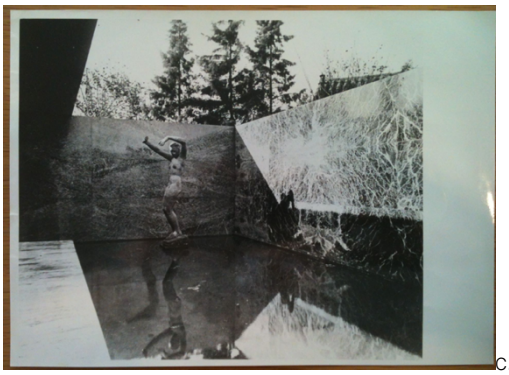


Image 5.3. *Diario Oficial de la Exposición Internacional de Barcelona 1929*, 12 (2 June 1929). Photographs from the German Pavilion by 'A' (anonymous). From Josep Quetglas's and Ricardo Daza's personal archive.


a.


b.


c.

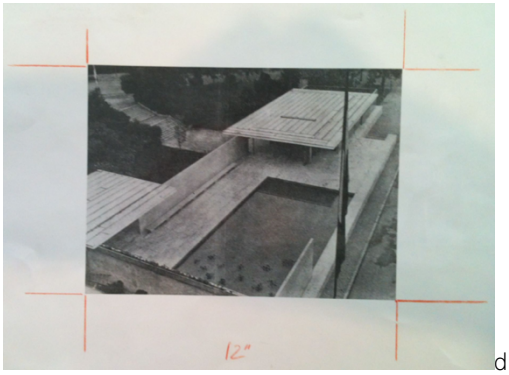

d.

Image 5.4. (a) 'Shot by visitor' – original Josep Quetglas. Thanks to Ricardo Daza for sharing this material. (b) Photograph of 'Dawn' that also depicts tile roofs behind. By Cami Stone, (MMA13337). (c) Insitut Municipal De Historia, photograph held by the Diario Oficial de la Exposición, unknown photographer. (d) photograph published in *Deutschen Bauzeitung* N5. 57 and 77 accompanying A. Beaschlin's articles (MMA 13.302). All these prints are held within the German Pavilion documentation, although in an independent and mostly uncatalogued folder.

Furthermore, the German Pavilion was photographed by the Spanish press, just as all the other Pavilions in the 1929 International Exhibition in Barcelona were. These images were not authorised for publication by Reich and Mies. Nevertheless, a couple of images made their way into the German architectural press of the time, as well as into the Spanish diary of the exhibition (see Figures 5.3 and 5.4).[11] My archival research reveals that these prints are also held in the Mies van der Rohe Archive at MoMA, thus demonstrating that Mies was aware of their existence. Within his documents, there are three unusual views; only one was published in *Deutschen Bauzeitung* (see Figure 5.4). Encountering these 'alternative' images prompts an awareness of the processes of omission and censorship involved in the construction of the photographic canon of the German Pavilion.

Another form of differencing is characterised by the processes of exclusion and different to the first form of differencing mentioned before characterised by the careful and subjective control over the image.[12] This proves that Mies shaped his own discourse within the modern movement, while also ensuring that both an architectural and a pictorial authorship would stand for his and Reich's Pavilion. This obsessive control is reminiscent of Jean-Louis Cohen's understanding (drawn from Walter Benjamin) of the subjective in the encounter between technical reproduction and architecture, where the subjective dimension is tied

[11] Alfredo Baeschin, 'Barcelona und Seine Weltausstellung', *Deutsche Bauzeitung*, 77 (25 September 1929). Some photographs by the Spanish press appeared in the *Diario Oficial de la Exposicion Internacional Barcelona*, 12, 1929. Other chronicles within Germany appeared in Justus Bier, 'Mies van der Rohes Reichspavillon in Barcelona', *Die Form*, 16 (1929), pp. 423–30; Hans Bernouilli, 'Der Pavillon des Deutschen Reiches und der Internationalen Ausstellung in Barcelona', *Werk*, November 1929, pp. 350–51; Walther Genzmer, 'Die Internationale Ausstellung in Barcelona', *Zentralblatt der Bauverwaltung*, 34 (1929), pp. 541–46; Walther Genzmer, 'Der Deutsche Reichspavillon auf der Internationalen Ausstellung, Barcelona', *Die Baugilde*, 1929, pp. 1654–57; Guido Harbers, 'Deutsche Reichspavillon in Barcelona auf der Internationalen Austellung', *Der Baumeister*, 1929, pp. 421–27.

[12] For a recent approximation to the omitted images, see the conference paper by David Caralt Robles, 'Pabellón cotidiano versus pabellón mítico. Notas sobre las fotografías casuales del pabellón de Alemania en la exposición internacional de Barcelona de 1929', in Inter Conference_2016_Interferencias/Interferences, pp. 1–37. Source: http://dadun.unav.edu/handle/10171/42439 Accessed: August 2018.

to the circulation of images of this production.[13] I suggest that the 'subjective' should be understood here as the compulsive control, and that this differentiates the prehistory of the printed dissemination of the Berliner Bild-Bericht.

5.1.1 It 'looks like' the Berliner Bild-Bericht prints

It was only in 1979 that an extensive study of the Pavilion was undertaken for the exhibition, curated by Ludwig Glaeser, that celebrated the 50th anniversary of the Pavilion's construction. This involved categorising over 20,000 documents from the recently consolidated Mies van der Rohe Archive at MoMA. Then, in the early 1980s, with the celebration of the centenary of Mies's birth, the inventory of all sources related to the Pavilion, including those held in Berlin, Barcelona and Chicago, were catalogued. This led to a more 'precise' understanding of what the building had been.

In parallel, and during the many years that the Berliner Bild-Bericht stood for the Pavilion, there were attempts to reconstruct, through drawing, the building's specificities. The idea of the Pavilion's reconstruction dates back to 1959 when the Spanish architect Oriol Bohigas first approached Mies to propose rebuilding the Pavilion. This first attempt did not crystallise, nor did many others until, in 1978–81, the reconstruction of the Pavilion was finally commissioned, to be undertaken by Glaeser and Bohigas with the support of the state.

The reconstruction team noted the difficulties of such an endeavour. These difficulties were primarily the lack of finalised working drawings, and the many differences in dimensions and detailing among the existing documents.[14] Therefore, the process of reconstruction involved the drawing up of the project as much as the construction of the building. In all interviews, contacts, documents,

[13] Jean-Louis Cohen, 'The Misfortunes of the Image: Melnikov in Paris, 1925 (On Architecture and Photography)', in Beatriz Colomina (ed.), *Architectureproduction* (New York: Princeton Architectural Press, 1988), p. 103.
[14] George Dodds elaborates on this on his book *Building Desire*.

studies and reports, the Berliner Bild-Bericht surface in this process as primary 'evidence' due to their archival condition. As Derrida has commented, it is a characteristic Western obsession to read the archive as the place to encounter 'beginnings, starting places, and origins'.[15] If they belong to Mies's archive, then it is supposed that they should be original and therefore truthful. Moreover, Colomina and Banham understand 'evidence' as corresponding to 'the fact that the industrial buildings that became icons for the modern movement were not known to the architects from "direct" experience [only from photographs], [and] the work of these architects themselves has become known almost always through photography and the printed media.'[16] 'Evidence' is, therefore, considered as truthful documents despite the many criticisms and taboos around the medium's reliability.[17]

Acknowledging that the prints' canonical status goes hand in hand with their repeated publication, and that this status has prompted a series of returns to the Berliner Bild-Bericht from different scholars in the field over the years (myself included), it is not surprising to read that the role that the Berliner Bild-Bericht prompted in the reconstruction of the building was essential, if not the main cause.[18] Such monumental enterprises would have never happened without the Berliner Bild-Bericht. What the reconstruction team aimed for – and achieved by making three-dimensional a bi-dimensional representation – was to construct a

[15] Jacques Derrida, *Archive Fever: A Freudian Impression* (Chicago: University of Chicago Press, 1996). For the different roles of archives within historical research, see: Carolyn Steedman, *Dust* (Manchester: Manchester University Press, 2001); and Arlette Farge, *The Allure of the Archives* (New Haven, CT: Yale University Press, 2013).

[16] Colomina, elaborating on Banham's statement in *A Concrete Atlantis* that 'Modernism was the first movement in the history of art based exclusively on "photographic" evidence'. See: Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, MA, and London: MIT Press, 1994), p. 14.

[17] In this respect, the work of George Dodds is of importance, as he asks what is it that the photographs 'document'. See Dodds, *Building Desire*, pp. 69–73 See also Patricia Morton, 'Editorial, On Evidence', *Journal of the Society of Architectural Historians*, 76.4 (2017), pp. 433–35; and Claire Zimmerman, 'Reading the (Photographic) Evidence', *Journal of the Society of Architectural Historians*, 76.4 (2017), pp. 446–48.

[18] Ignasi de Solà-Morales, Cristian Cirici and Fernando Ramos, *Mies van der Rohe: el Pabellón de Barcelona* (Barcelona: Gustavo Gili, 1993), p. 38. See also Remei Capdevila-Werning, 'Every Difference Makes a Difference: Ruminating on Two Pavilions and Two Modernities', in Juan José la Huerta and Cecilia Marín (eds), *Mies van der Rohe Barcelona 1929* (Barcelona: Fundació Mies van der Rohe Barcelona and Editorial Tenov Books, 2018), pp. 203–34.

building that 'looked like' the canonical images. While working drawings could give the specificities of detailing and construction, the overall purpose of such an endeavour was, according to the reconstruction team, to allow the building, rather than the photographs, to be physically experienced.[19] By doing so, they gave shape to Mies's determination to have a building that 'looked like' its photographs; therefore, they were constructing a as a result of Mies' control and 'photographic authorship'.

This relates to Colomina's contribution to the conference entitled *The Presence of Mies*, hosted by architectural historian Detlef Mertins in 1994. Colomina opened the section on 'Mies and Images' with a paper entitled 'Mies not' in which she argues that what mattered for Mies was 'not how [the buildings] are really built, but what they "look like"'. According to Colomina, what counts for Mies is 'their image, their photographic image'.[20] Given that Mies' architecture became known almost exclusively through photography and the printed media,[21] given the fragile nature of photographs as paper media, and given Mies's awareness of their permanence (which was greater than in many of his building projects), it is possible that photographs were one of Mies's most productive sites of production. The German Pavilion is one of the most illustrative examples. It secured a place in architecture through its repeated publications, but, as Colomina further argues, it also secured a historical place that was determined not just by the historians and critics (such as Colomina herself) but also by the architect who deployed this media.

[19] Solà-Morales et al., *Mies van der Rohe*, p. 39.
[20] Beatriz Colomina, 'Mies not', in Detlef Mertins (ed.), *The Presence of Mies: Symposium: Papers* (New York: Princeton Architectural Press, 1994), p. 179.
[21] Beatriz Colomina, 'Manifesto Architecture: The Ghost of Mies', in Juan José la Huerta and Cecilia Marín (eds), *Mies van der Rohe Barcelona 1929* (Fundació Mies van der Rohe Barcelona: Editorial Tenov Books, 2018), pp. 181–201.

5.2 Photographic authorship

Whereas the previous section focused on some of the conditions of the canonical photographs' emergence and construction – highlighting Mies as the 'photographic author' behind the emergence and canonical consolidation of the Berliner Bild-Bericht and, by extension, also of the building's reconstruction – this section considers the re-emergence of an 'authorial' search in the 1980s, this time as a consequence of the photographs' archival condition.

5.2.1 Photographs in the archive

It is possible to argue that the Berliner Bild-Bericht prints were canonical before they arrived in the archive, and that Mies had shaped this condition. However, the arrival of Mies's archive in MoMA prompted a series of new questions, and it identified the photographic prints as singular objects of inquiry. It brought to the fore the understanding of these prints as singular material objects, and it led to a renewed question of 'authorship', as it was through archival encounters and the handling of the photograph as a material object that the Berliner Bild-Bericht came to light in the first place.[22]

The question of the Berliner Bild-Bericht photographs as singular objects in archives is also the manifestation of a broader debate. This debate has reflected a shift in scholarly attention within photographic and archival practices regarding photographs in archives; photographs began to be treated as equals to any other written or drawn document, thereby gaining importance as singular objects – as 'photographic evidence' or 'photographic documents'.[23] In

[22] For a detailed account of the arrival of the Mies archive at MoMA, see Xavier Costa, 'The pavilion and its archive', in *Muntadas on Tranlsation: Paper BP/MVDR. Intervention in the Mies van der Rohe Pavilion*, Mies Files 01. (Barcelona: Actar,2010) p. 16.
[23] On photographs in archives, see Kent Kleiman, 'Archiving Architecture', *Archival Science*, 1 (2001), pp. 321–22; Alan Sekula, 'The Body and the Archive', *October*, 39 (Winter 1986), pp. 3–64; and Mark Wigley, 'Unleashing the Archive', *Future Anterior: Journal of Historic Preservation, History, Theory and Criticism*, 2.2 (2005), pp. 10–15.

architecture, photographs began to be scrutinised and underlined as the most accurate reflection of what was built, despite the awareness that photographs could be staged. In the case of the Berliner Bild-Bericht, they have always been considered documentary evidence of a project that physically existed, even if only temporarily.

The arrival of the Berliner Bild-Bericht at MoMA meant that the prints could be experienced in their material nature for the first time and by any interested scholar, and that their allure as archival material would prompt a distinct reading of them.[24] Evidence of this shift can be seen in the work of architectural historians Claire Zimmerman and George Dodds who, in the early 2000s, approached the 1929 photographs as Berliner Bild-Bericht photographs, as singular objects encountered in the archive.[25] Both Dodds and Zimmerman clarify that their approximation to the building is a consequence of this close encounter with the prints. However, while Dodds focuses on understanding the allure and meaning of the stories of the German Pavilion through an interpretation of these archival images, Zimmerman uses them to argue that the Berliner Bild-Bericht prints played an important role in Weimar Republic propaganda and the ideological battles that characterised architecture in the late 1920s and early 1930s. In addition to this reading, Zimmerman discusses the Berliner Bild-Bericht stamp and raises questions that had not previously been considered, since previous emphasis had been mostly on the indexical qualities and characteristics of the depicted building: the prints' provenance and the photographic authorship – here understood as the photographer

To understand this shift in the scholarship of the Pavilion and more specifically of the Berliner Bild-Bericht, I turned to the archive as the place where these canonical prints are held: to the Museum of Modern Art in New York, to the Bauhaus Archives in Berlin and Dessau, to the Canadian Centre for Architecture

[24] See Farge, *The Allure of the Archives*.
[25] Only in 1985, almost sixty years after the initial dissemination of the Berliner Bild-Bericht prints, did architect Franz Schulze mention them as part of the fate of the Mies archive: Franz Schulze, *Mies van der Rohe: A Critical Biography* (Chicago: The University of Chicago Press, 1985).

in Montreal, and to the Berlinische Galerie in Berlin. In addition, the Barcelona Pavilion Archive in Barcelona and RIBA in London also hold some modern reproductions.[26]

These visits to different archives show that, despite being holders of what they still refer to as 'originals', for one set of fifteen Berliner Bild-Bericht there are multiple copies, either modern or vintage. In some cases, they are copies made by re-photographing other prints. They are repeated and differenced by the nature of their photographic reproduction. They are even further differenced by the archival identity that they have acquired in comparison to other archives. For example, the Berliner Bild-Bericht at MoMA are, in the words of its archivist, 'originals' because they are probably prints that Mies commissioned and owned. In other archives, such as the Bauhaus Archiv in Dessau, their significance responds to their materialisation as modern prints (or reproductions from the vintage prints) that came from auctions – although this proves that there were other prints circulating, and therefore that there were not *just* fifteen Berliner Bild-Bericht. The prints held by MoMA are not, therefore, the only 'original' ones. In some archives, such as the Berlinische Galerie, the Berliner Bild-Bericht are significant because they prove signs of provenance and alteration that are not

[26] Most images corresponding to the Berliner Bild-Bericht Berlin-based photo agency are housed in the Mies van der Rohe archive at the Museum of Modern Art in New York (archival references no. MMA 297, MMA 298, MMM 299, MMA 1437, MMA 1180, MMA 1197, MMA 1554, MMA 1814, MMA 7360, MMA 11254, Seidman 167, Seidman 247, Seidman 248). For a detailed description of their sizes and of the archival exchange among archives, see Dodds, *Building Desire*. Another six are held at the Bauhaus Archiv in Dessau (Inv Nr. I7681J, 6-F-008533 00985DP refers to the vintage copies, Inv Nr. I 110 F refers to the modern prints; there are also two modern copies of two vintage Berliner Bild-Bericht) and eight are at the Berlinische Galerie in Berlin (under Sasha Stone: Inv Nr. 3.9.6, 3.9.7, 3.9.5, 3.9.4, 3.9.2, 3.9.11 and one more without a catalogue number; under Niemann Photo: BG-FS-28/84.1 for the German Pavilion). A series of modern print copies are held at the Bauhaus Archiv Berlin (the following photographs can be found in the Folder 4691, Ludwig Mies van der Rohe Barcelona Pavilion: Inv-Nr. 4691, Inv. Nr F231, Inv-Nr. 10550, Inv-Nr. 8338, Inv Nr-8596 [modern reproduction of the retouched copy at Berlinische Galerie] and seven are unlabeled, although some have extra documentation about which journal or publication they were lent to for reproduction purposes) and some other archives, such as the Canadian Centre for Architecture (DRI994: 0014:004:002, DRI994: 0014:004:003, DRI994: 0014:004:004, DRI994: 0014:004:005, DRI994: 0014:004:006, DRI994: 0014:004:009, DRI994: 0014:004:010, DRI994: 0014:004:011), the Chicago Historical Society and the Library of Congress in Washington. In addition, the Akademie der Kunste in Berlin and the Mies van der Rohe foundation in Barcelona own six archival prints of the Barcelona Pavilion. Some prints in private collections have recently been included in art auctions and found on the Internet.

present on prints owned by other institutions.[27] Not surprisingly, the first conversation with archivists echoes recent scholarship on the subject of finding an 'origin': either the Berliner Bild-Bericht's provenance (as above), or their 'photographic author' or photographer.

The prints that have received more scholarly attention are those held at MoMA. Curator Xavier Costa argues, as Zimmerman also did, that it is unlikely that Mies brought photographs in 1938 when he walked across the German border into Holland, as the contents of Mies's Berlin office went into storage and were sent to Mühlhausen once Berlin was under threat. Costa explains that they were not retrieved until Hans Maria Wringer of the Bauhaus and Dirk Lohan from Mies' office in Chicago did so in 1963.[28]

Zimmerman has demonstrated that the provenance of the Berliner Bild-Bericht at MoMA corresponds with overseas transactions, donations and purchases. In her PhD thesis, she discusses how Philip Johnson acquired a large number of photographs for the museum in the process of curating the 1932 International Exhibition of Modern Architecure.[29] In the preparations for the 1938 exhibition of his work at the Art Institute of Chicago, Mies requested former Bauhaus student Howard Dearstyne to send any copies in his possession; Dearstyne also donated a small number of images for the 2001 exhibition. By this time, there were few sources of 'original work' in the US, and MoMA was already then the biggest proprietor.

Further prints may have been acquired in the course of MoMA's archival consolidation. Two late additions came to Mies's photographic collection: in 1959, Frederick Kiesler sent Mies a batch of photographs of Mies's European

[27] For the information in this paragraph, I am grateful to Tanja Keppler from Berlinische Galerie, Dr Sylvia Ziegner in the Bauhaus Archiv, Dessau, Sabine Hartmann and Wencke Clausnitzer in the Bauhaus Archiv Berlin, Paul Galloway in the Study Centre at MoMA, and Maristella Casciatto, Louise Dèsy, Mathieu and Colin Macwhirter at the CCA in Montreal.
[28] Xavier Costa, 'The pavilion and its archive', p. 17.
[29] See Claire Zimmerman, 'Modernism, Media, Abstraction: Mies Van Der Rohe's Photographic Architecture in Barcelona and Brno (1927–1931)', PhD thesis, City University of New York (2005).

work from his own files; over ten years later, Willy Hauswald, a Bauhaus student from the Berlin days, also sent a collection of photographs of Mies's work to the architect.[30] In addition, my archival research has identified a number of prints in the collection that still bear on their backs the pencil trace 'Hilbs' for Ludwig Hilberseimer. Finally, a group of 150 photographs surfaced in the summer of 2004, supposedly from the office of Lilly Reich. This cache of photographs contains many duplicates of those in the MoMA files (see Figure 5.5).[31]

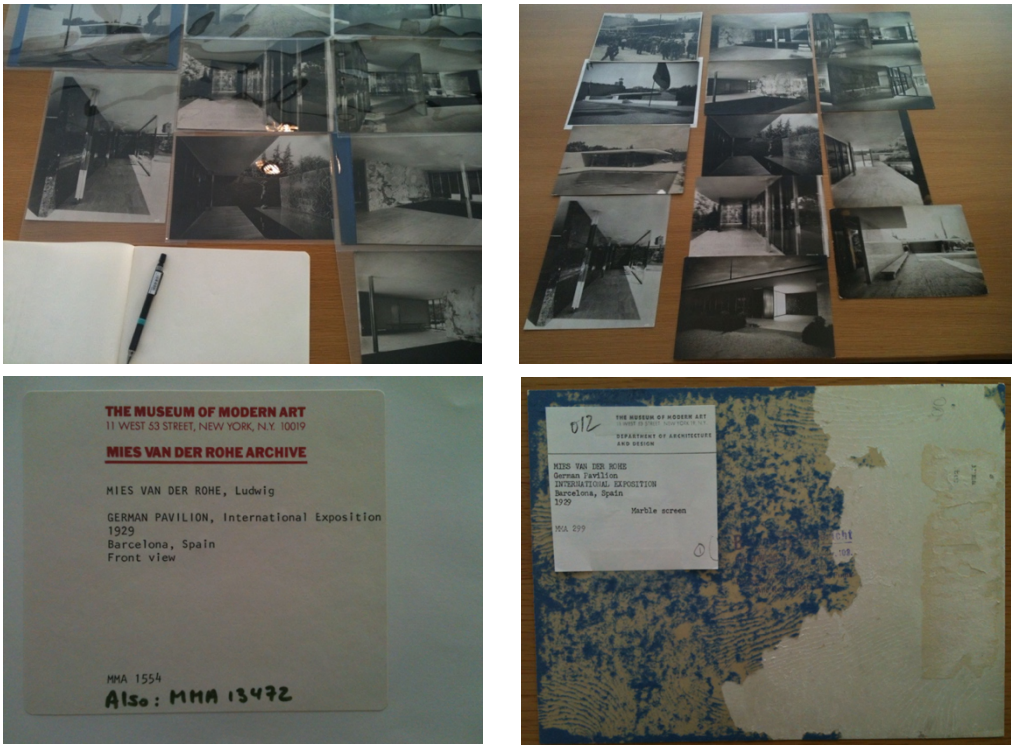


Figure 5.5. Photographic snapshots while observing the Berliner Bild-Bericht prints held at MoMA

In the case of the Bauhaus Archiv in Dessau, the vintage prints bearing the Berliner Bild-Bericht stamp on their backs were acquired in 1995 from Jurgen Kronberg; Kronberg had bought them for 30 marks in 1989 from Elfriede Nicholas Hofer, Mies's former housekeeper in Berlin. Furthermore, the series of modern

[30] Kiesler, letter of 11 March 1959; Hauswald, letter of 9 May 1967; both filed under "Unidentified Correspondence", Mies van der Rohe papers, Library of Congress, Containers 36 and 7, cited in Zimmerman, 'Modernism, Media, Abstraction', p. 37.
[31] Zimmerman, 'Modernism, Media, Abstraction', p. 36.

prints with a Hedrick-Blessing Photographers stamp (Chicago) on their backs had recently been acquired from the Galerie am Sachsenplatz in Leipzig (see Figure 5.6).[32] In contrast, the ones in the Bauhaus Archiv have no clear provenance except donations and acquisitions from auctions (see Figure 5.7). In addition to provenance, the other means of proving authenticity is that of the 'photographic author'.

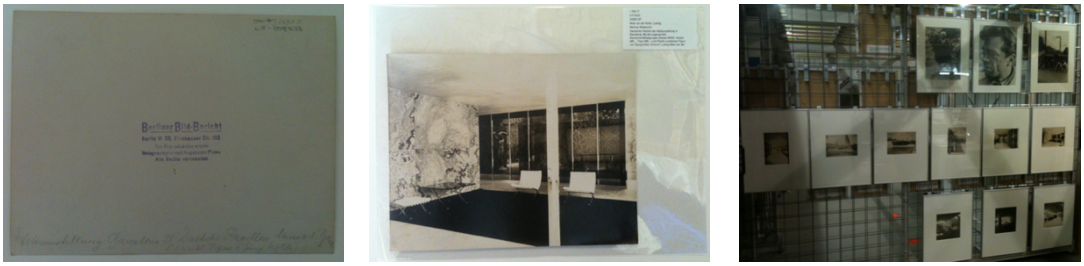


Figure 5.6. Berliner Bild-Bericht prints at the Bauhaus Archiv, Dessau as individual documents and framed photographs.

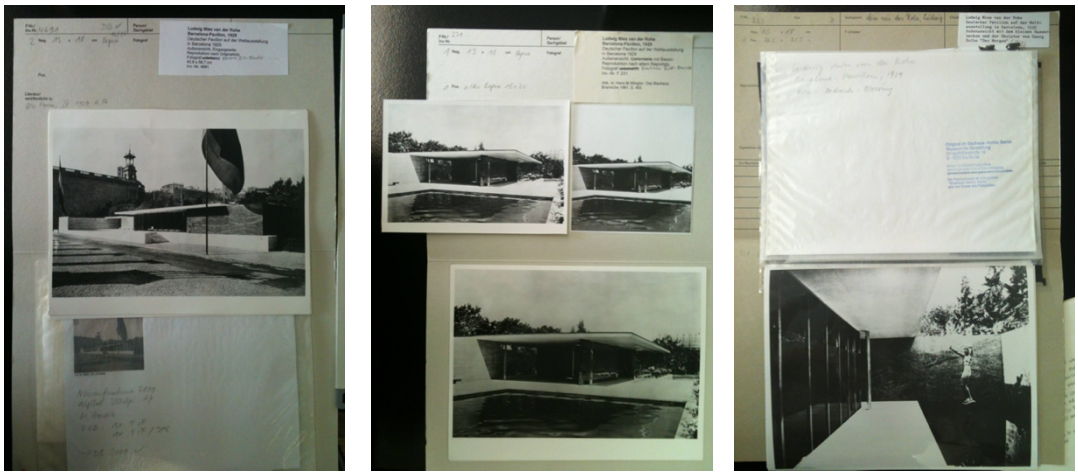


Figure 5.7. Series of modern prints from the Berliner Bild-Bericht held at the Bauhaus Archiv, Berlin.

5.2.2 The photographer as 'author'

After encountering the Berliner Bild-Bericht in the archives and seeing the Berliner Bild-Bericht stamp at first hand, it became possible to understand why the stamp prompts the question of 'authorship' and resists the understanding of

[32] I am grateful to Sylvia Ziegner, the archivist at the Bauhaus Archiv Dessau, for this information.

the prints as photo-reproductions. Their archival condition emphasises their singularity as objects with distinct material qualities. However, it is worth recalling that the stamp is that of a photo agency; thus, the prints, as in the case of the elevators, were purchased, exchanged and reproduced on demand.[33] Photographic agencies produce and stock photographs in order to make them available for various editorial and commercial uses, which, particularly during the Weimar Republic, were catalysts and results of an upturn in photography as a visual medium, as the case of the elevators also demonstrates.[34] This freedom of dissemination seems to go against, first, the archival condition in which they are here encountered and whose significance lies in the individual photographic print, and, second, the search for an author responsible for what was then repeatedly disseminated.

For Zimmerman, the question of authorship remains an ambiguous one since it is distributed between the architect (who controlled) and the photographer (who shot). However, she suggests that Wilhelm Niemann, owner and photographer of the Berliner Bild-Bericht photo agency, is 'photographic author', since all fifteen prints are credited to the Berliner Bild-Bericht and were then commissioned, or possibly later sold, to Niemann's agency. Zimmerman's hypothesis is also informed by the fact that, besides the German Pavilion, the Berliner Bild-Bericht agency was also credited for some photographs of the German exhibition stands in Barcelona in 1929.[35] Niemann was also the 'photographic author' of the photomurals, as well as of all the photographic documentation of the *Bau Austellung* exhibition in Berlin in the same year as the Barcelona exhibition (see

[33] 'In the fifties, Niemann sold the work belonging to his Berliner Bild-Bericht to Ludwig Klemm, who operated the agency in Dusseldorf that was the successor to Franz Stoedtner's art-historical photo archive': Rolf Sachsse, 'Mies and the Photographers II', in Reuter and Schulte (eds), *Mies and Modern Living*, p. 261. Despite the ambiguities surrounding their provenance and authorship, therefore, the Berliner Bild-Bericht prints always maintained their commercial status.
[34] For a detailed description of the role and the agency of photographic banks and agencies, see Estelle Blaschke, 'Photography and the Commodification of Images: From the Bettman Archive to Corbis (ca. 1924-2010)', PhD thesis, École des Hautes Ètudes en Sciences Sociales, (2011); and Matthias Bruhn, 'Tarife für das Sichtbare. Eine kurze Geschichte der Fotoagenturen', *Fotogeschichte: Beiträge zur Geschichte und Ästhetik der Fotografie*, 27.105 (2007), p. 19.
[35] Evidence for this is in the Berlinische Galerie in Berlin where some of the remaining prints are held. See image I 36295, wrongly referenced as Ausstellung 'Deutsches-Volk Deutsch Albeit' 1924, Berlin.

Figure 5.8).[36] In the 1920 and 1930 he also worked on several important Werkbund exhibitions.[37] Niemann was acknowledged for his expertise in photographic enlargement, a common practice since the mid-1920s. Some of his most impressive work was seen in the *Die Kamera* exhibition in 1933 (also held at the Berlinische Galerie) while working for Albert Speer, and in *Die Strasse* in 1933/34 (see Figure 5.9).[38] According to Zimmerman, Niemann never described himself as the author of the Barcelona Pavilion images, which together with the exhibition in Paris 1930 had a lasting impact.[39] In his own view, he had no authorial status over the images that made the German Pavilion so famous.



5.8



5.9

Figure 5.8. Wilhelm Niemman photographs, Berlinische Galerie. 1929 Auf der Bau-Ausstellung. Archival reference no. BG-FS33/82.16.
Figure 5.9. Bausstellung, Berlin 1931. Mies van der Rohe and Lilly Reich's project. Archival reference no. BG-FS33/32.25.

The theory that Niemann was the photographer of the Pavilion is supported by Dodds, who at the same time brings a possible third name into play: Arthur Köster, a recognised photographer of the period in Germany. According to Dodds,

[36] See image FS 99/82.16 Berlinische Galerie, Berlin.
[37] See *Die Form* 5 (1930) for the Decorative Arts exhibition in Paris and *Die Form* 6 (1931) for the Berlin Building exhibition.
[38] Some other photo-mural work can also be seen in the following exhibitions: Tripoli 1930, Helsinki 1939, and Plovdiv in 1939 (photographs held at the Berlinische Galerie, Berlin). In 1934, Niemann assumed an official position at the Berlin offices of the Deutsche Werkbund. With the rise of the National Socialist Government, he dropped the appellation 'Berliner Bild-Bericht' together with his affiliations to the Weimar avant-garde. While working for Albert Speer, and on related projects with the Nazi government (such as a 1930 exhibition in Serbia), he used his own name, 'Niemann Photo'. See FS 99/82.11, FS 99/82.8, FS 99/82.13 Berlinische Galerie, Berlin.
[39] Zimmerman, 'Modernism, Media, Abstraction', p. 140.

Köster could have been the photographer of the Monument to the November Revolution among other of Mies's buildings. Birgit Hammers also follows the theory of Zimmerman and Dodds on Niemann, and further argues that photographers Sasha and Cami Stone and Arthur Köster could also have been responsible. Sasha Stone had previously shot photographs for Reich and Mies, such as the *Café Samt & Seide* at the *Mode der Dame* show in Berlin 1927. It is known that Sasha Stone was present in Barcelona, as he was commissioned to photograph the German Silk Industry Pavilion. Because of this, Hammers argues, it would be difficult to imagine that Stone photographed all the German pavilions apart from the German Empire Pavilion. She further argues that it is also possible to credit Cami Stone, Sasha Stone's wife, who was with him in Barcelona and was also a photographer.[40]

For Hammers, the question of 'authorship' is one that concerns the artistic endeavour of the photographer rather than the control or decision of the architects. The 'author', according to Hammers, is the photographer and the photograph has the status of an 'art work'. Hammers performs a formal analysis of the images to support her argument: the reflections, the melting of outer and inner space, the perspectival view that focuses on a relevant feature in the centre of the image, and a very clear photographic structure are some of the features she identifies as characteristic of Sasha Stone photographs, and all are present in the Berliner Bild-Bericht. Moreover, she points at the incongruity of finding photographs of the Pavilion published in the journal *Querschnitt* as well as in *Zentralblatt der Bauferwaltung* on 21 August 1929 under the name of Sasha Stone, and in *Die Form* on 15 August 1929 and attributed to the Berliner Bild-Bericht agency. Hammers argues that the architects might have simply liked the photographs that Stone first made of the Pavilion, and then used them for further publication and dissemination under the Berliner Bild-Bericht name.

[40] Birgit Hammers, 'Vom Dokument zur Legende - Zur Autorschaft der Fotografien des Barcelona Pavilions', *Zeitschrift für Kunstgesichte*, Heft 4 (2009), pp. 545–56. I am grateful to Tanja Keppler from Berlinische Galerie for alerting me to this article.

In correspondence, Mies scholar Helmut Reuter affirmed to me that 'to our knowledge there are different series. Only the first is taken by Stone.'[41] According to Sachsse:

> Stone did an impressive job of translating the designs by Mies and Reich into photographs; no longer did they awaken any impression of enclosure, symmetry, or even any sort of coziness whatsoever ... Instead of the angled verticals that distinguished the experimental photography of the late twenties, Stone brought together the vanishing points diagonally in the pictures of both the exhibition and the Barcelona Pavilion, producing pitfalls of perspective when the viewer looks into the depth of spaces in the photos.[42]

The rest, according to Reuters, were made by Niemann.[43]

The implication of Hammer's research and Reuter's argument is already evidenced in the Berlinische Galerie in Berlin, whose archivist pointed out that most of the images from the German Pavilion will be catalogued under the name 'Sasha Stone'. The Berliner Bild-Bericht with unclear provenance are catalogued under Sasha Stone, not under Mies (which is generally the case – a consequence of his architectural and pictorial authorship), or Ruegenberg (in whose archive they currently appear, and from whom the prints where acquired between 1925 and 1934).[44] Being catalogued under a recognised photographer's name raises awareness of the significance that this has for the prints and their scholarship. However, one of these prints also appears in Niemann's archive, evidence of the controversies around recent interest in the authorship of the images (see Figure 5.10).[45]

[41] Email correspondence with Helmut Reuter, 30 August 2012.
[42] Reuter, Tegethoff and Sachsse, 'Mies and the photographers 1' in Reuter and Schulte (eds), *Mies and Modern Living*, pp. 241–42.
[43] Email correspondence, 30 August 2012.
[44] This change was about to occur in 2013-2014 when I first visited the archive.
[45] The question of the selection of the photographs housed at the different archives with the different archivists always triggered interesting discussions about authorship, notions of the 'original', and archival power and knowledge.



Figure 5.10. Above: Photographs of the 1929 Pavilion, among Sergius Ruegenberg's papers. Below: Berliner Bild-Bericht print of the German Pavilion held among the Wilhelm Niemann papers, Berlinische Galerie, Berlin.

5.3 The 'Death of the Author'

There is a certain uneasiness prompted by the uncertainties that characterise the Berliner Bild-Bericht prints. This chapter has discussed the question of the 'author' as a key uncertainty. However, my study suggests that, within these investigations, the interest lies in the author as the producer, though not in Benjamin's terms, because for him the notion of the 'author' implied a reflection on processes of production and 'producers'.[46] Instead, it explores how the notion of the 'author' is here played out, and how this identification affect the photographs' 'use value,' to borrow again Benjamin's term.

The search for the 'photographic author' of the Pavilion's photographic prints – whether that author is Mies who controlled and shaped the images preceding

[46] Walter Benjamin, 'The Author as the Producer', address at the Institute for the Study of Fascism in Paris, 27 April 1934, in Benjamin, *Reflections: Essays, Aphorisms, Autobiographical Writings* (New York: Schocken, 1986), pp. 220–38.

their publication, or the individual who shot the photographs – gained relevance 70 years after the Berliner Bild-Bericht were originally published through the poststructuralist interest of Barthes' declaration of 'The Death of the Author', Foucault's 'What is an Author?' and Derrida's *Of Grammatology*.[47] This interest inverts the postmodern claims for a critique of the author as the originator of creative works. This authorial search is also symptomatic of a broader phenomenon. Photography re-emerged as a contested ground as a result of postmodern explorations on the role of images in architecture, the agency of photography for and within architectural discourses, the role that photographic imagery has in the reception of history, and the use of photography as a means of argumentation.

Even if photography in its mechanical character has long been understood as a threat to the category of the 'author', Allan Sekula argues that these authorial claims return to an authorial authority re-established on intellectual labour, one of the main driving forces of photography in early modernism.[48] Within the Weimar Republic, the 'author' gained a particular relevance in photojournalism, art photography and, most importantly, architectural photography; Mies is one of the best examples.[49] These attempts have always understood an individualised author, with a status, who gives the building and the photographs an aura of authenticity – and, in this case, a canonical status.[50]

[47] See Roland Barthes, 'The Death of the Author', in *Image, Music, Text*, trans. Stephen Heath (London: Flamingo, 1984); Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore and London: Johns Hopkins University Press, 1976); and Michel Foucault, 'What is an Author?', in James L. Marsh, John D. Caputo, and Merold Westphal (eds), *Modernity and its Discontents* (New York: Fordham University Press, 1992).
[48] Allan Sekula, *Photography Against the Grain: Essays and Photo Works, 1973–1983* (Halifax, NS: Press of the Nova Scotia College of Art and Design, 1984), p. xiv.
[49] See Daniel H. Magilow, *The Photography of Crisis: The Photo Essays of Weimar Germany* (University Park, PA: Pennsylvania University Press, 2012); Pepper Stetler, *Stop Reading! Look! Modern Vision and the Weimar Photographic Book* (Ann Arbor, MI: The University of Michigan Press, 2015); Robert Lebeck, *Kiosk: A History of Photojournalism* (Göttingen and London: Steidl and Thames and Hudson, 2002).
[50] This relates to the opening remarks of Foucault's 'What is an Author?' and to his purpose of setting aside the sociohistorical analysis of the author: Foucault, 'What is an Author?', p. 302.

The authorial search that re-emerged in the 1980s was characterised by the search for the individual in the form of a 'photographic author', whether this was Niemann, Köster or the Stones. This further illustrates Bernard Edelman's description of the legal development of the concept of the 'author' in photography. The Berliner Bild-Bericht and their recent theorisation are examples of the second stage of what Edelman denominates as the 'paradox of photography': the transition of the 'soulless labour to the soul of labour', the moment in which the recognition of the quality of the photographer as creator becomes a necessity.[51] Thus, the 'imprint of personality' pulled photography from the machine and brought it into the domain of an operative and creative subject.

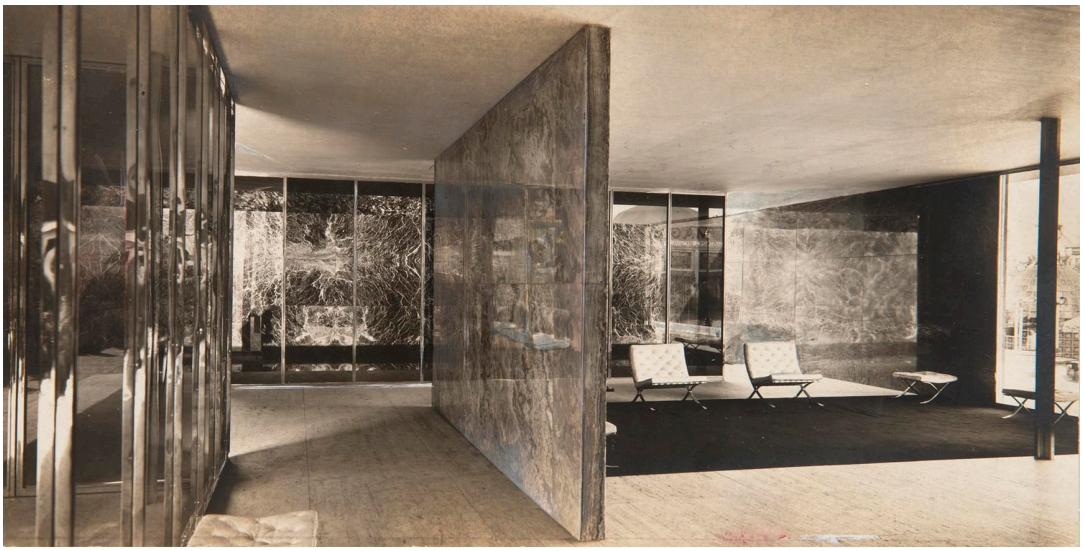
Moreover, these investigations prove that the question of authorship is one of the categorical difficulties of architectural photography, and that authorship emerges as a question in the first place is, arguably, a phenomenon that derives in these cases from the canonical status of the photographs themselves – the Berliner Bild-Bericht resist anonymity. It is as if finding the individual would be the explanation of the work. Mies, Niemann, Stone: each implies a different understanding and interpretation of the Berliner Bild-Bericht. The figure of the 'author' migrates from the architect to the photographer; from the 'instrumental photographer' as Niemann has been read, to an 'artist photographer' such as Sasha or Cami Stone. Yet the question seems to have begun with and returned to an individual; it has returned to Barthes's definition of the author as 'a modern figure, a product of our society insofar as ... it discovered the prestige of the individual, of, as it is more nobly put, the "human person"', as well as to Foucault's attention to the author as performing a certain classificatory function.[52]

Questions around the 'authorship' of the 1929 Berliner Bild-Bericht prints of the German Pavilion have been, within architectural history, one of the primary

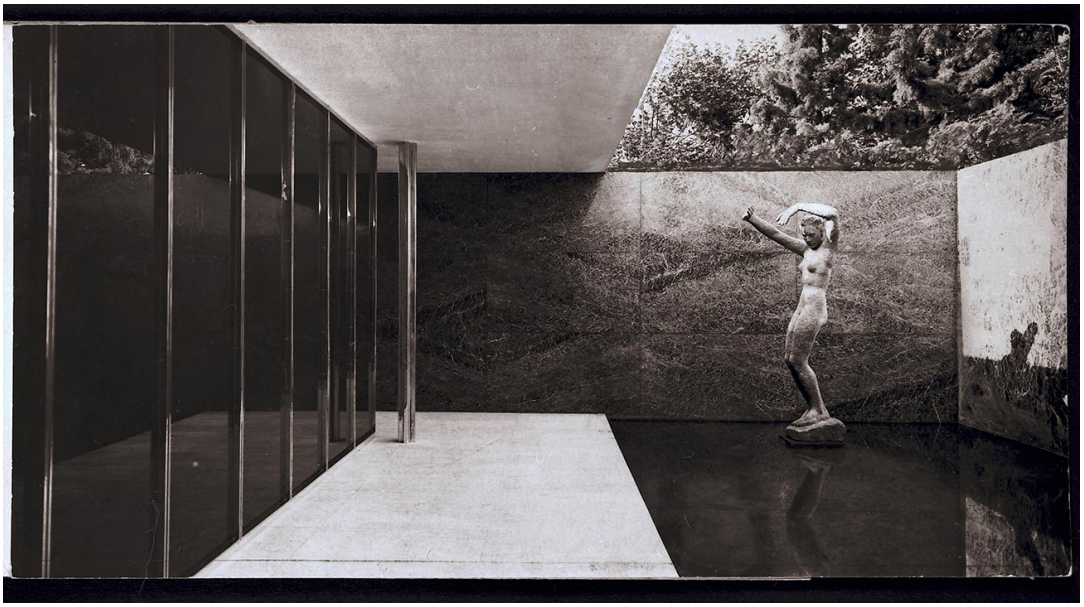
[51] Bernard Edelman, *Ownership of the Image: Elements for a Marxist Theory of Law* (London: Routledge and Kegan Paul, 1979), p. 44.
[52] Barthes, 'The Death of the Author', pp. 142–43; Foucault, 'What is an Author?'

lenses through which the photographs have been understood and interpreted. Although research study considered, in its early stages, contributing to the existing scholarship by following such threads, it soon identified these searches as symptomatic of the photographic canonical stance, and, furthermore, as a means of reinstating the canon. Drawing upon Barthes's 'Death of the Author' and following Gayle Greene's and Coppélia Kahn's questioning of the author within literary criticism through a feminist lens, the following chapters will free 'the text from its author' (to use their words). More precisely, they will free the Berliner Bild-Bericht from the quest of their photographic author, as a means of opening the Berliner Bild-Bericht up to a plurality of interpretations, and of releasing them from the constraints of a single univocal reading, thus making them 'available for production, plural, contradictory, capable of change ... unfixed'.[53] The following chapters will suggest that different approaches prompt different processes of 'disentanglement, where meaning is no longer limited or closed off by "the Author"'.[54] Freeing the photographs from an authorial lens or interpretation – even if only momentarily –is to allow the relevance of such questions to be scrutinised.

[53] Gayle Greene and Coppélia Kahn, 'Feminist Scholarship and the Social Construction of Woman', in Greene and Kahn (eds), *Making a Difference: Feminist Literary Criticism* (London: Methuen, 1985), p. 25. See also pp. 27–28.
[54] Greene and Kahn, 'Feminist Scholarship and the Social Construction of Woman', p. 25. See also Cheryl Walker, 'Feminist Literary Criticism and the Author', *Critical Inquiry*, 16.3 (Spring, 1990) pp. 551–71, Sara Ahmed, *Differences that Matter: Feminist Theory and Postmodernism* (Cambridge: Cambridge University Press, 1998) – especially the chapter entitled 'Authorship'.



6.1.



6.2.

Figures 6.1 and 6.2. Hand and airbrushed prints of the German Pavilion's interior, and of its water mirror with Morgen sculpture. Berliner Bild-Bericht prints. Archival ref. no. Ruegenberg 3_9_5 and Ruegenberg_3_9_7 respectively. Berlinische Galerie, Berlin.







6.3.



6.4.

Figures 6.3 and 6.4. Cropped details of hand-retouched Berliner Bild-Bericht – zooms from digital images. Scanned by the Berlinische Galerie.

In 2012 I encountered these two hand-retouched photographs of the German Pavilion in Barcelona. Both date from 1929 (see Figures 6.1 and 6.2). They are housed at the Berlinische Galerie in Berlin and held in the archive of Sergius Ruegenber (Mies's collaborator at the time the German Pavilion was built). My encounter was destabilising.

[Figure 6.3] All alterations that the photo-reproductions have concealed throughout their history of repeated publication can be seen. There was no more invisibility. Edges of window frames and floor slabs were redrawn. A fine red line retraces the perimeter of the shiny window frames. Rough brushes of grey marker extend over the reflection of the white leather cushions, over the onyx wall and over the plaster ceiling, eliminating textured light rays. There is no more sun coming in, neither against the ceiling nor against the wall. White lines render the columns shiny; white thick brushes make them slim. Borders have been etched out with a thick cutter and covered with a thick black marker. The photograph has been wounded.

Arguably the nature of the materials used in the Pavilion is reflective. However, this retouched photograph speaks for a series of painted and drawn reflections, rather than for natural reflections coming from the materials themselves.

[Figure 6.4] In the re-photographed and published version of this image, something slightly strange on the onyx wall can be identified. Upon closer observation, when holding it in one's hands with care so that the light brings out all the details, it is possible to see thick grey brush marks, rough etchings, random pencil colouring, white paint. As abstract as they can be, they all construct the series of reflections repeatedly seen in publications. Although evidently altered, it is hard to imagine that each of these lines that were hand drawn, understanding what happens to them, will be transformed – effaced, by the process of reproduction that will follow. Surprisingly, in their boldness, none of them appear as cautiously done as they probably were.

What were once photographs are now drawings. This is unique. And from this uniqueness, a multitude of repeated prints have appeared in a number of publications with no traces of what I am looking at now. These drawings ask for close attention and an intimacy in which the painterly drawing comes to the fore; this is an experience denied by the invisible retouched prints, as well as by their reproduction.

6

The ‘optical unconscious’ of the Berliner Bild-Bericht prints

I pursued a direct encounter with the photographic prints of Mies van der Rohe’s and Lilly Reich’s German Pavilion for the Barcelona International Exhibition in 1929 in five of the archives where these prints are held as a first attempt to disrupt the photographic canon of the Berliner Bild-Bericht, and to destabilise the unquestioned belief in its evidential status in relation to the (absent) building. The archives were the Bauhaus Archiv in Berlin, the Bauhaus Archiv in Dessau, Mies van der Rohe’s archive at MoMA New York, the Berlinische Galerie in Berlin and the Centre for Canadian Architecture in Montreal (see Figure 6.5). By encountering photo-reproductions as the photographic objects from which they originated I hoped to find something that the iteration of their reproductions concealed. There is a certain uncanniness about their immutable presence, and something troubling about their repeated appearance and dissemination by the printed media for the last ninety years. The narrative that introduces this chapter is an attempt to reproduce the encounter with two airbrushed and hand-retouched photographs in the Berlinische Galerie in Berlin, which, in contrast to the other prints found in the other archives, prompted an intimacy (see Figures 6.1 – 6.4). It was this intimacy that prompted a different reading of the Berliner Bild-Bericht photographs.



Figure 6.5. Left: At the Bauhaus archive in Dessau, encountering for the first time the Berliner Bild-Bericht prints. Right, at MoMA, facing the 'mute' and 'hermetic' Berliner Bild-Bericht prints. Photographs by author.

Despite the amount of scholarship, these photographs have been used almost uncritically throughout the history of publications about the Pavilion. Most of this scholarship does not refer to the photographs (as photographic objects) but instead focuses on their representational content. [1] Even recent scholarship still focuses on questions of 'authorship', on what the building 'looked like', or on how the alterations that the photographs underwent inform how the building should or should not be perceived.[2]

This chapter focuses on the distinct experience of the direct encounter with a retouched Berliner Bild-Bericht as found in the archive. It argues that a direct –

[1] This dichotomy has been explored in George Dodds, *Building Desire: On the Barcelona Pavilion: Photography, Modernity and the Barcelona Pavilion* (Oxford: Routledge, 2005), Claire Zimmerman, 'Modernism, Media, Abstraction: Mies van der Rohe's Photographic Architecture in Barcelona and Brno (1927--1931)', PhD thesis, City University of New York (2005); Rolf Sachsse, 'Mies and the Photographers: Medium and Modernity as Enigma', in Helmut Reuter and and Birgit Schulte (eds), *Mies and Modern Living: Interior, Furniture, Photography* (Ostfildern: Hatje Cantz, 2007); Birgit Hammers, 'Vom Dokument zur Legende - Zur Autorschaft der Fotografien des Barcelona Pavilions', *Zeitschrift für Kunstgesichte*, Heft 4 (2009), pp. 545–56; Jonathan Hill, *Weather Architecture* (London and New York: Routledge, 2012); and Claire Zimmerman *Photographic Architecture in the Twentieth Century* (Minneapolis: University of Minnesota Press, 2014). See, among others, Evans, 'Mies van der Rohe's Paradoxical symmetries'; Mertins, 'Architectures of Becoming'; Lambert, 'Mies Immersion'; Bergdoll, 'The Nature of Mies' Space'; Tafuri and Dal Co, *Modern Architecture*; Neumayer, *The Artless Word*.

[2] See especially Dodds, *Building Desire* and Zimmerman, *Modernism, Media, Abstraction*. Among other sources on the Berliner Bild-Bericht B, see Reuter and Schulte, *Mies and Modern Living*; Quetglas, *Fear of Glass Mies van der Rohe's pavilion in Barcelona* (Basel: Birkhäuser, 2001); Evan's, 'Mies van der Rohe's Paradoxical Symmetries'; and Bonta, *Architecture and Its Interpretation*.

and thus an intimate and subjective – encounter with the archival image is a valuable means of questioning and disrupting the photograph's historical and ideological constructions. In other words, it argues that the encounter with these unique prints is a new condition in the chain of repetition, producing in turn a critical subjectivity.

I will question the Berliner Bild-Bericht photographs' canonical status within architectural history and discourse by bringing to the fore two distinct material conditions of the prints as found in the archive: the photographs' 'visible' and 'invisible' alterations, both of which have resulted from photographic retouching. I call some of the alterations 'invisible' because they are not possible to experience or to evidence in the repeatedly published Berliner Bild-Bericht prints. When seen as photo-reproductions, as well as modern prints, they have already been through, or are about to undertake, a process of ideological retouching and manipulation. This contrasts with the 'visible alterations', which are those I could see and experience in one of the Berliner Bild-Bericht prints housed at the Berlinische Galerie's Archive, and to which I will refer in this chapter. Both are intermediary conditions that become evident when comparing the conditions of the prints *before* and *after* retouching.

This encounter also led me to think of a possible unconscious. More precisely, drawing upon the work of Walter Benjamin and Rosalind Krauss, I thought of a Berliner Bild-Bericht as an optical unconscious. Such an unconscious refers to the lack of consciousness in the ways in which we have repeatedly experienced the photographs; matter that is given to us in the experience of the photo-reproductions, but of which we remain unaware. It is the 'unconscious' that only becomes evident via an unmediated encounter with the retouched image; in a mediated encounter, such as when they are re-photographed, recognition of the marking disappears. Furthermore, an optical unconscious prompts a distinct reading of this intermediary condition and thus becomes a productive tool both in the interpretation of the photographic prints and in the interruption of their repetition as photo-reproductions.

6.1 Invisible retouching

Numerous scholars have investigated the use of photography in the service of modern architecture.[3] Some have further explored how processes of photographic retouching were a common means to fulfil the ideals of the architecture they depict. One of the most known and studied examples is Le Corbusier's publication of the retouched Bunge y Born elevator in Buenos Aires in the inaugural issue of *L'Esprit Nouveau*, and under the subtitle 'Volume'.[4] Three years later it was reprinted and republished in *Towards an Architecture*; again, it was retouched, but it was also mislabelled as Canadian (see Figures 6.6–6.7).[5]

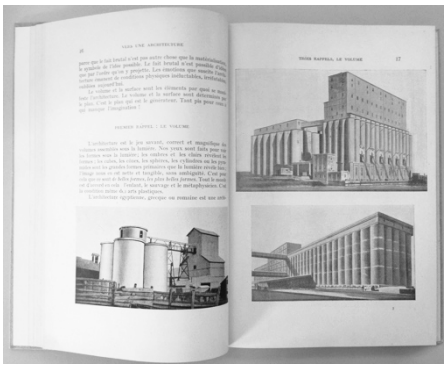
These publications followed Gropius's first printed dissemination of the elevators in the *Werkbund Yearbook* in 1913. According to Banham, these photographs made the elevators 'the most internationally influential structure ever put up in North America' and therefore placed them among the most 'established icons of modernity'; the influence of these photographs, Banham argued, was 'felt throughout modern Europe'.[6] However, when these alterations are brought up within architectural discourse, the focus lies on the *before* and *after* conditions of the processes. Banham, for instance, states that the repeated publication of the Bunge y Born's retouched photograph is a scandal.[7] For Jean Louis Cohen,

[3] For example: David Campany, 'Architecture as photography: Document, publicity, commentary, art', in Alona Pardo and Elias Redstone (eds), *Constructing Worlds: Photography and Architecture in the Modern Age* (Munich: Prestel, 2014); Iñaki Bergera, 'Photography and modern architecture: A distinctive narrative from Spain', *Journal of Architecture,* 21.7 (2016), pp. 1127–48; Andrew Higgott and Timothy Wray (eds), *Camera Constructs: Photography, Architecture and the Modern City* (Burlington: Ashgate, 2012); Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media*, (Cambridge, MA, and London: MIT Press, 1994); Beatriz Colomina (ed.), *Architectureproduction* (New York: Princeton Architectural Press, 1988); Kester Rattenbury (ed.), *This is Not Architecture: Media Construction* (London and New York: Routledge, 2002); Beatriz Colomina, 'Le Corbusier and Photography', *Assemblage*, 4 (1987), pp. 6–23, Anne Hultzsch and Catalina Mejía Moreno, 'Building word image: Printing architecture 1800–1950', *Architectural Histories*, 4.1, p. 13, DOI:http://doi.org/10.5334/ah.220; Claire Zimmerman, 'Photographic modern architecture: Inside the new deep', *Journal of Architecture*, 22:5, pp. 968–91.
[4] Le Corbusier-Saugnier, 'Trois Rappels à MM. LES ARCHITECTS; premier rappel: le volume', *L'Esprit Nouveau*, 1.1 (1920), p. 95.
[5] Le Corbusier, *Toward an Architecture*, trans. John Goodman (Los Angeles: Getty Research Institute, 2007), p. 103.
[6] Reyner Banham, *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture 1900–1925* (Cambridge, MA: MIT Press, 1986), pp. 11, 15, 173.
[7] Banham, *A Concrete Atlantis*, p. 15.

the retouching is 'the most notorious falsification in the history of modern architecture';[8] and Beatriz Colomina, in her interpretation of the altered photographs of Le Corbusier's Villa Schwob published in *L'Esprit Nouveau* (Figure 6.8), describes the image as 'fake'.[9]

But while Le Corbusier is a widely known case, Mies's alterations come from a different background. Mies's knowledge and interest in image retouching and alteration must necessarily be understood within the ideological battles – or the struggle to impose a distinctive language, new ideas, values and images by which individuals were supposed to perceive their society at this particular historical and political moment – that were taking place in Germany after the World War One, and which reached their most 'provocative extremes' in the 1920s and early 1930s.[10] As Claire Zimmerman and Kai Gutschow have argued, through new kinds of image juxtaposition (as in the practices of German architect Paul Schultze-Naumburg, Swiss art historian Sigfried Giedion and German critic Adolf Behne) and through the use of photo-collages to reinforce their architectural ideals (as in the case of Mies; see Figure 6.9), architects and critics aimed to promote their visions of 'Modern Architecture' as part of their wider attempt to redefine German culture.[11]

[8] Jean-Louis Cohen, 'Introduction' to Le Corbusier, *Toward an Architecture*, p. 8.
[9] Colomina, *Privacy and Publicity*, p. 111.
[10] See Joan Ockman (ed.), *Architecture, Criticism and Ideology* (Princeton: Princeton Architectural Press, 1985).
[11] See: Kai K., Gutschow. 'The Culture of Criticism: Adolf Behne and the Development of Modern Architecture in Germany, 1920–1914.' PhD thesis, Graduate School of Arts and Sciences, Columbia University (2005). Kai K, Gutschow, 'The Anti-Mediterranean in the Literature of Modern Architecture.' In *Modern Architecture and the Mediterranean: Vernacular Dialogues and Contested Identities* (pp. 149-74). London and New York: Routledge, 2010.


6.6


6.7

Figure 6.6. Left: retouched image of Buenos Aires Bunge y Born elevator from Le Corbusier, 'Trois Rappels à MM. LES ARCHITECTS; premier rappel: le volume', *L'Esprit Nouveau*, 1:1 (1920), republished in Le Corbusier-Saugnier, *Vers une architecture* (Paris: Les EditionsG. Cres Et C., 1923), p. 17. Source: Fondation Le Corbusier, Paris. Photograph by author.

Figure 6.7. Right: Bunge y Born elevator in its state before demolition. From *Diario Junio Digital*, http://www.diariojunio.com.ar/noticia.php?noticia=63568 (accessed 8 July 2017).



Figure 6.8. Villa Schwob, 1916. Photographs c.1920. Further right, as published in *L'Esprit Nouveau*. From Beatriz Colomina, 'Le Corbusier and Photography', p. 13.

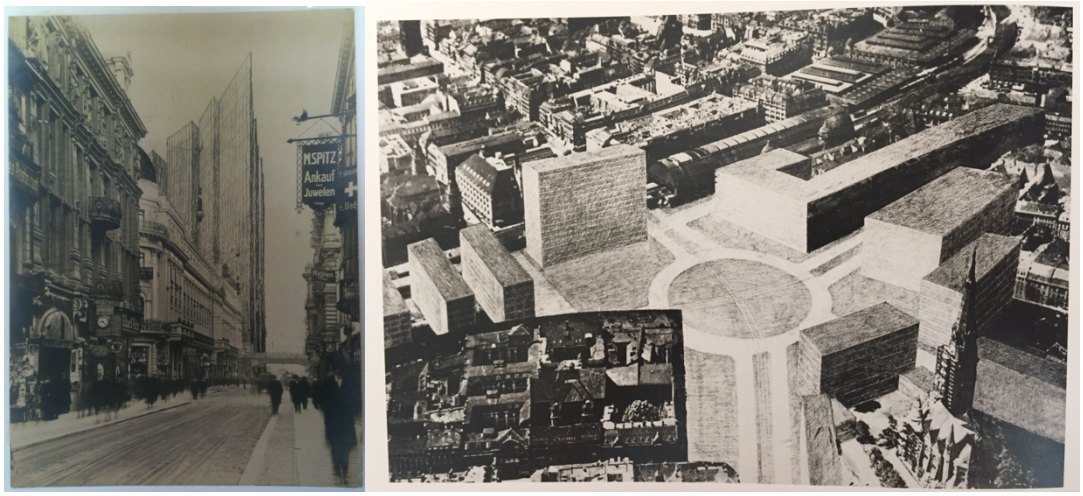


Figure 6.9. Friedrichstrasse skyscraper, drawing on photographic paper, 1921–1922 (Bauhaus Archiv Dessau – photograph by author), Alexanderplatz remodeling. Photomontage on aerial view postcard, 1929. From Helmut Reuter and Birgit Schulte (eds), *Mies und das neue Wohnen: Räume, Möbel, Fotografie* (Ostfildern: Hatje Cantz, 2008).

Although in this context Mies's skyscrapers are well-known examples, there are other cases in which this photographic manipulation was used as a means for other types of criticism. The altered photographs of Stuttgart's Weissenhof housing exhibition from 1927 are one of the most discussed examples. Architectural historian Kai K. Gutschow discusses Walter Curt Behrendt's use of the photograph with an heroic flag waving to pronounce the 'victory of the new building style',[12] and thereby to proclaim it as a victorious example of 'Modern Architecture'.[13] However, as Gutschow discusses, Paul Schultze-Naumburg contrasted a view of the Weissenhof Siedlung with a picturesque (and highly racist) view of a seaside village on the Greek Island of Santorini to illustrate how 'un-German' de Siedlung was, as its flat roofs and cubic forms had been developed previously in the 'Orient' (see Figure 6.10).[14]



Figure 6.10. Postcard of the Weissenhof as Arab Village, highlighting the modern and the Mediterranean. From Kai K. Gutschow, 'The Anti-Mediterranean in the Literature of Modern Architecture', in Jean-François Leheune and Michelangelo Sabatino (eds), *Modern Architecture and the Mediterranean: Vernacular Dialogues and Contested Identities* (London and New York: Routledge, 2010), p. 149.

[12] Walter Curt Behrendt, *The Victory of the New Building Style* (Los Angeles: Getty Research Institute, 2000).
[13] François Leheune and Michelangelo Sabatino (eds), *Modern Architecture and the Mediterranean: Vernacular Dialogues and Contested Identities* (London and New York: Routledge, 2010), p. 149.
[14] Paul Schultze-Naumburg, *Das Gesicht des deutschen hauses* (Stuttgart: G.W. Callwey, 1929), quoted in Kai K. Gutschow, 'The Anti-Mediterranean in the Literature of Modern Architecture', in Leheune and Sabatino (eds), *Modern Architecture and the Mediterranean*, p. 149. For commentary on the Weissenhof estate as an Arab Village, see also Richard Pommer, 'The Flat Roof: A Modernist Controversy in Germany', *Art Journal*, 43.2 (1983), pp. 158–69.

These photographic alterations and manipulations result from the introduction to architecture of a series of photographic techniques that were initially and mainly used for portraiture in late nineteenth-century Germany, but which established themselves as a common practice for image alteration in general. The ethical nature of such processes was not a matter of concern, perhaps because they were so productive. The processes generated complex arguments that, because of their visual nature, could be easily understood. They were popular and strategic means of celebrating the arrival of modern architecture to the extent that they were even used as book covers, as in the case of Ludwig Hilberseimer's *Internationale Neue Baukunst* and Adolf Behne's *Eine Stunde Architektur* illustrate (see Figure 6.11).[15]

Behne's book has, in particular, received attention due to its provocative photographic collage. Architectural historian Spyros Papapetros argues that the photo-collage designed by Max Fischer for the book cover is a way for Behne to proclaim that 'scholars should leave their cubicles, come out into open air, and project their study into space' – a characteristic modern concern – 'instead of safeguarding the windowless and enclosed studio of Dürer's St Jerome'.[16] However, Papapetros continues, the criticality posed by the image alteration goes beyond a literal suggestion to become a metaphorical critique: 'The saint's relocation on top of Le Corbusier's terrace signals not only the divinely sanctified emergence of modern architecture, but also the origin of its inherently teleological (and partly theological) perspective.'[17] Hilberseimer's case is more straightforward: for his book cover, the buildings were airbrushed and isolated.

[15] Ludwig Hilberseimer, *Internationale Neue Baukunst, no.2* (Stuttgart: Verlag J. Hoffman, 1927) and Adolf Behne, *Eine Stunde Architektur* (Stuttgart: Akademischer Verlag Dr. Fritz Wedekind, 1928).
[16] Spyros Papapetros, 'Saint Jerome in his Modernist Study: An afterword to Adolf Behne's *Eine Stunder Architektur*', *Pidgin*, 6 (2008), p. 273.
[17] Papapetros, 'Saint Jerome in his Modernist Study', p. 275.



Figure 6.11. Collaged and retouched image of Ville Savoye on the cover of Adolf Behne's *Eine Stunde Architektur*; retouched images as a book cover for Ludwig Hilberseimer's *Internationale Neue Baukunst*.

The edited Berliner Bild-Bericht photographs of the German Pavilion are the result of two different processes of retouching that were also used for ideological purposes, as in the case of Behne and Hilberseimer: manual, or 'visible', and airbrush, or 'invisible', retouching. According to photographic retouching manuals,[18] 'invisible retouching'– or techniques for airbrushing – can be divided into two: one of a corrective nature, necessary to overcome any faults such as spots, glare and creased clothing in the darkroom, or stains and scratches on the negative; and the other of a 'creative' or additive nature. In the latter, the use of airbrushing allows for erasure or alteration of contexts, rendering of edges, removal of disturbing and distracting elements, and blurring or removal of fixed contrasts and human figures. These processes were also exposed in other cases, such as in Walter Müller-Wulckow's *Blaue Bücher,* 1929 (see Figures 6.12–6.13). The processes were rarely described as 'manual retouching', even though manual labour is involved; they are usually referred to as 'mechanical retouching'.[19]

[18] Retouching manuals were published alongside the invention of photography; retouching processes were understood as being able to guarantee full fidelity and recognition of a truthful image. They continued to be published for more than a century. Today they also exist for digital photography. Some examples are: Robert Johnson, *A complete treatise on the art of retouching photographic negatives and clear directions how to finish & colour photographs* (London: Marion & Co., 1889); Otto R. Croy, *Retouching: Corrective Techniques in Photography* (London and New York: Focal Press, 1953); and Kitty West, *Modern Retouching Manual* (Garden City, NY: Amphoto, 1973).
[19] Rolf Sachsse, 'Mies und die Fotografen II: Medium und Moderne als Enigma', in Helmut Reuter and Birgit Schulte (eds), *Mies un das neue Wohnen: Räume, Möbel, Fotografie* (Ostfildern: Hatje Cantz, 2008), p. 255.



Figure 6.12. On the left, marks on tracing paper as instructions for retouching: crop marks, highlighting of contrast, effacing of the context. The result is the image on the right. Source: Walter Müller-Wulckow, *Architektur 1900-1929 im Deutschland* (Konigstein im Taunus: Karl Robert Langewiesche, 1929).



Figure 6.13. Two examples of photographic images of iconic buildings of German modernism. At upper left, the photograph as shot; at upper right, the result of retouching. Below left: the photographic print as shot; on the left, already retouched. Farther left, tracing paper with instructions of retouching. Walter Müller-Wulckow's *Blaue Bücher.* Source: Walter Müller-Wulckow, *Architektur 1900-1929 im Deutschland* (Konigstein im Taunus: Karl Robert Langewiesche, 1929).

Standardised procedures for airbrush retouching were followed for exteriors, but usually not for interiors due to the effacing and blurring nature of the alteration process. Airbrushing was effective for wider areas rather than for details, as advised by retouching manuals:

> The foreground and the sky should be taken care of first while the building should be protected by a frisket. Any light posts, overhead wires, tree branches, and other unattractive elements should be removed by opaquing and must be blended as part of the sky, sidewalk, or street. There is no need to retain any parts of adjoining buildings or structures. They should usually be removed so they do not retract from the central building.[20]

More specifically, an 'unwanted' object should be covered using white, grey, or black, depending on the area adjacent to that object. For example, to remove a black pole from in front of a white building, white should be used. The foreground area should be airbrushed to remove all breaks, cracks and irregularities in the building, leaving a perfectly smooth front area. The ultimate aim was for the photograph to present and preserve a *seamless surface*. According to a retouching manual: '[N]o matter how much retouching is required, [the work upon a photographic print] becomes part of that photograph and *does not give the appearance of having been reworked*. The effect is smooth; there are no lines, chalk marks, or scratches.'[21] There should be no evidence, traces, or visible alteration to the materiality of the photograph's surface. All is concealed; all remains silent – as in the altered Berliner Bild-Bericht photographs that have undergone processes of 'invisible retouching'.

As these images testify, processes of alteration and retouching were laborious. Detailed instructions and careful alterations were required to achieve the expected results. These retouching practices are reminiscent of the nineteenth-century conservation practice of isolating monuments from their unworthy surroundings. Referring to these 'invisible alterations', George Dodds comments:

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[20] Alexander Shafran, *Airbrushing Photo Retouching Manual* (New York: Amphoto, American Photographic Book Publishing Co., 1968), p. 7.
[21] Shafran, *Airbrushing Photo Retouching Manual*, p. 7. (My emphasis.)

> three of the prints are airbrushed with *light grey paint*, masking out either imperfections of surfaces or elements that Mies apparently considered distracting ... In one, the tower of the Casamarona textile factory was airbrushed away, in other, one part of the ceiling is painted to remove the mottled effect of the painted plaster ceiling.[22] (See Figure 6.14)

For some, as Martino Stierli has argued, this responds to a strategy of monumentalisation by isolation.[23] All attention was directed to the building, but not to its immediate or wider context. Borrowing Stierli's words, this process monumentalised the building, yet it also shaped the materiality of the building through visual means. As a result, all attention directed to the building as an isolated object, and to its smooth and polished material surfaces.

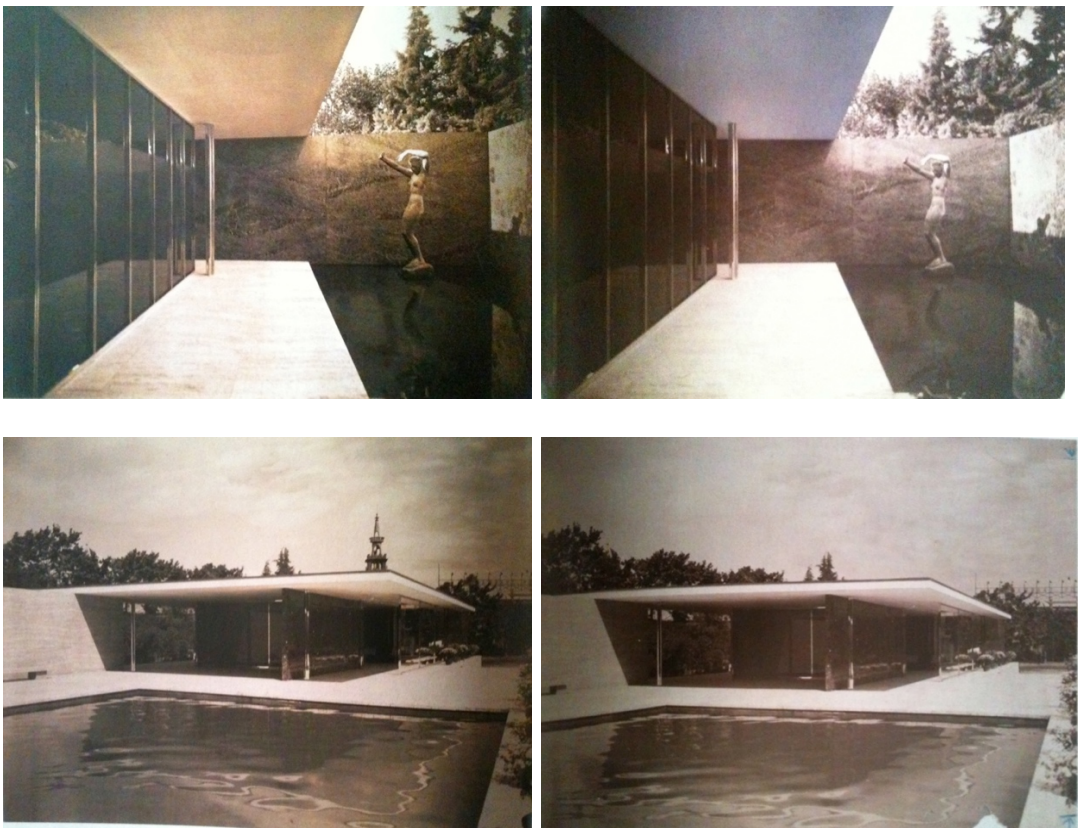


Figure 6.14. Berliner Bild-Bericht photographs. On the left, photographs as shot; on the right, after retouching. Source: George Dodds, *Building Desire: In the Barcelona Pavilion* (New York and London: Routledge, 2005).

[22] Dodds, *Building Desire*, p. 9.
[23] Martino Stierli, 'Photomontage in/as Spatial Representation', *PhotoResearcher*, 18 (2012), p. 37.

This concealment – an act of giving '*the appearance of not having been reworked*' as the retouching manuals state –suggests the existence of an in-between and intermediary condition that sits between the *before* and *after* of these photographs and makes visible these photographic retouching processes.

6.2 Visibly retouched



Figure 6.15. Above: Berliner Bild-Bericht with 'visible' retouching only. Below: Berliner Bild-Bericht with 'visible' and 'invisible' signs of retouching. These two are snapshots of images 9 and 10, taken with an iPhone and a low-quality resolution as determined by the archivist. Photographs by author.

From the five archives I visited, the only evidence of how the images had been retouched is held at the Berlinische Galerie in Berlin which houses five vintage Berliner Bild-Bericht prints within the archive of the former Mies collaborator, Sergius Ruegenberg. Of the five, two showed signs of retouching. One has a mixture of 'visible' and 'invisible' retouching, and the other signs of 'visible retouching' only (see Figure 6.15). As their archival condition and provenance indicate, both were mostly likely worked on in Mies's office.[24] Although Dodds discusses the existence of the 'invisible' retouched images, the encounter with the 'visible' hand-retouched prints was unexpected and surprising, as I had been unaware of their existence. None of the scholarship has yet discussed their role and construction, nor even their existence.

Once able to experience them directly and intimately in the space of the archive, the question was how to take this experience with me beyond the archive. This distinct experience is one that I believe determines and informs the reading of the other prints and unveils the construction of their ideological stance.

As a researcher in the archive, I first tried to document this encounter visually through snapshots that could capture all the details (as this was the only way allowed by the archive to do so). I tried inclining the photograph in various ways so that the scratches on the photographic surface could be seen, the opacity of the white brush marks could be sensed, or the roughness of the photographs after being drawn could be perceived. But it was impossible. These photographic reproductions as they appear in this document are still not a faithful representation of that experience (see Figure 6.16).

I therefore tried to reproduce it through words – and here I return to the text with which I opened this chapter:

> This encounter is destabilising. All alterations that the photo-reproductions have concealed throughout their history of repeated publication can be seen. There

[24] Thank you Tanja Keppler for a very rich conversation about provenance of these retouched images.



Figure 6.16. Series of photographic zooms that try to grasp through snapshots the haptic qualities of the photographic print as encountered in the Berlinische Galerie in Berlin. Photographs by the author.

> was no more invisibility. Edges of window frames and floor slabs were redrawn. A fine red line retraces the perimeter of the shiny window frames. Rough brushes of grey marker over the reflection of the white leather cushions, over the onyx wall and over the plaster ceiling eliminating textured light rays. There is no more sun coming in; not against the ceiling or against the wall. White lines render the shiny columns, white thick brushes make them slim. Borders have been etched out with a thick cutter and covered with a thick black marker. The photograph has been wounded.

In contrast to the 'invisible retouched' images, this 'visible retouched' photograph does not follow any clear or standard alteration procedures, thus demonstrating why it is almost impossible to instruct the process as photographic manuals do for airbrushing techniques. In a process of addition and superimposition, drawing and cutting, as a product of craft and hand labour, the seam between the photograph and its alterations is made manifest and visible, transgressing the seamless surface desired by the retouching manuals. The retouching, and the labour involved here, cannot be 'invisible': the nature of its retouching process forbids it, as if going against the 'ultimate aim' of all photographic retouching manuals. However, in some way it still responds more to François Choay's description of these processes of photographic manipulation as 'constructive deconstructions'[25] yet not to Rolf Sachsse's interpretation of Mies's photographic work as 'machine retouch' in which, 'after the first reproduction, it was difficult to tell if a design had been drawn directly onto a photo or first scaled down, laid out on paper, and then glued to the picture.'[26] Conversely, they do not speak to the initial photo-works by Mies where drawn photographs (this time intentionally drawn over with plain colours) are superimposed for collage purposes, such as the one that Mies submitted for the Bismarck Monument competition from 1910.

[25] François Choay, *L'Allégorie du patrimoine* (Paris: Seuil, 1992), p. 13, cited in Stierli, 'Photomontage in/as Spatial Representation', p. 37.
[26] Sachsse, 'Mies und die Fotografen II', pp. 255–56.

Unlike Mies's early glass skyscrapers, the retouched Berliner Bild-Bericht can be considered neither a collage nor a montage, despite the ideological associations of this craft. Moreover, in contrast to Mies's characteristic photomontages or collages, these retouched Berliner Bild-Bericht prints do not include any juxtaposed heterogeneous elements, objects or fragments from outside the confines of art, architecture or photography, and they are not composed of representations.[27]

Yet there are things that remain intriguing. Arguably, the nature of the materials used in the Pavilion is reflective. However, what the interior retouched photograph speaks for is a series of painted and drawn reflections, rather than for natural reflections coming from the materials themselves. This indicates that the 'reflective nature' of the Pavilion, as critics and historians have thought of it, is mainly a product of manual labour: the manual process of retouching. It is still intriguing that this is the shot that has received most attention from scholars, and that from which most interpretations regarding the building's reflective nature have derived.[28] This drawn Berliner Bild-Bericht is the only copy that has these manual traces of retouching and the only copy from which most of the published reproductions in the 1930s were produced before the dissemination of the modern prints or photographs of those photographs. Furthermore, it is unsurprising how it is precisely the process of mechanical reproduction, and therefore the process of making visible and public, that silently effaces all traces and all labour. When materialised as photo-reproductions, images undergo, as Benjamin expressed it, processes of 'diminution', which, due to the possibility of an endless repetition and dissemination, 'helps people to achieve control over

[27] For the difference between collage and montage in Mies's work, see Martino Stierli, 'Mies Montage', *AAFiles*, 61 (2010), pp. 54–72. See also Martino Stierli, *Montage and the Metropolis: Architecture, Modernity and the Representation of Space* (New Haven, CT, and London: Yale University Press, 2018); Andres Lepik, 'Mies and Photomontage, 1910–1938', in Terence Riley and Barry Bergdoll (eds), *Mies in Berlin* (New York: Museum of Modern Art, 2001), pp. 324–29; Phyllis Lambert, 'Collage and Montage', in Lambert (ed.), *Mies in America* (Montreal: Canadian Centre for Architecture, 2001), pp. 204–11.
[28] For one of the most important examples, see Josep Quetglas, *Fear of Glass*.

works of art'.[29]

6.3 Optical unconscious

It is precisely the question of the intimate encounter with the photograph that gives way to Benjamin's 1931 essay, 'Little History of Photography', one of the earliest histories of the medium. With reference to psychoanalysis, Benjamin coins the term optical unconscious to argue that the optical unconscious designated the new realm of experience made accessible by photography in a similar way to how psychoanalysis constituted an access to the psychic unconscious.

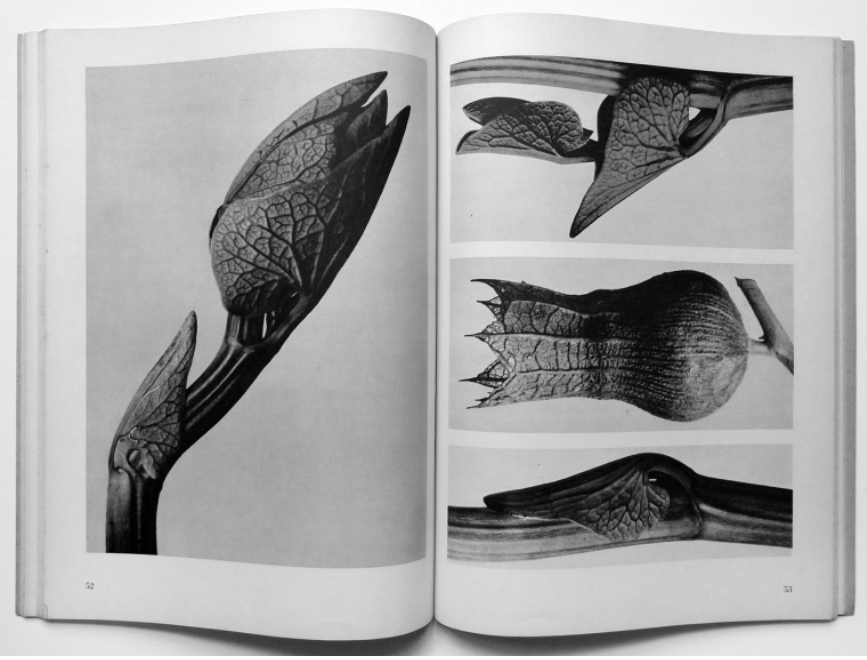


Figure 6.17. Karl Blosfeldt, *Urformen der Kunst: Photographische Pflazenbilder* ['Originary Forms of Art: Photographic Images of Plants'] (Berlin: Ernst Wasmuth, 1928), p. 53.

[29] Walter Benjamin, 'Little History of Photography', in *Walter Benjamin Selected Writings*, ed. Marcus Bullock and Michael W. Jennings (Cambridge, MA, and London: Belknap Press, 1996–2003), vol. 2, p. 507.

Already in 1922 Benjamin's engagement with photography through Baudelaire's photographic work stressed the capacity of a photograph to grant access to that which was unavailable to human vision. Some years later, writing about Karl Blosfeldt's 1936 book *Urformen der Kunst* ('Originary forms of Art') (see Figure 6.17), Benjamin acknowledged that Blosfeldt's photographic plates, which were characterised by the use of zoom to enlarge the plants, were 'a geyser of new image-worlds that hisses up at points in our existence where we would least have thought them impossible'.[30] Using the geyser as a metaphorical reference to an eruption of images triggered by the viewing of photographs inevitably entails the idea that they are produced, at least in a small part, in the unconscious.[31] At the same time, it links the emergence of the photograph's 'image-worlds' to the way in which photographs (as well as film and other photo-based media) make possible a distinct viewer's experience. This is what in 1931 Benjamin designated and would designate again in 1936 as the optical unconscious.

One of the aspects that came to the fore in Benjamin's first iteration of the optical unconscious is the suggestion that this viewing entails a subjectivity, as our perception of photographs is conditioned by our encounter with them. Benjamin asked: 'What is to be said of an observer to whom these forms already send out signals from their veiled state?'[32] It is possible to argue that the 'veiled' state to which Benjamin refers is the intermediate condition between the *before* and *after* photographs. That which we do not see when experiencing them as photo-reproductions is that which the optical unconscious draws upon – what we do not see is equivalent to the unconscious. Yet the difficulty here (or even, perhaps, the contradiction) is to place an archival object – the retouched image – as the material evidence of something we have seen but are not conscious of.

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[30] Walter Benjamin, 'News about Flowers', in Benjamin, *The Work of Art in the Age of its Technological Reproducibility and Other Writings on Media*, ed. Michael W. Jennings, Brigid Doherty and Thomas Y. Levin (Cambridge, MA, and London: Belknap, 2008), p. 272 (originally published in *Die Literarische Welt*, November 1928).

[31] See Michael W. Jennings, 'Photography', in Benjamin, *The Work of Art in the Age of its Technological Reproducibility*, p. 264.

[32] However, these 'image-worlds' are not solely subjective. Benjamin implies that some part of their character is objective and inherent in the photographic image itself as a product of a technical reproduction process. See Benjamin, 'News about Flowers', p. 272.

When the retouched image is seen as a photographic reproduction, we do not receive the retouching unconsciously. Instead, I experienced it in the (archival) object of the retouched photograph, and so as an object.

However, there is another productive reading of Benjamin's optical unconscious that derives from the closeness prompted by the image as well as from the different type of vision it triggers. This reading provides an alternative history of the Berliner Bild-Bericht prints and their photographed building. By accessing the optical unconscious, I experienced the images individually – and subjectively – thus reducing the transformations produced by the medium and imposed by the altered Berliner Bild-Bericht prints whose alterations had been effaced through processes of re-photographing or mechanical reproduction. This process is analogous to what Rosalind Krauss's optical unconscious, according to which the subject's own vision and subjective experience play a determinant role in the understanding of the art object. Benjamin's and Krauss's optical unconscious recognise different forms of vision, or, in other words, an objective and subjective reading of the photograph that is significantly determined by the encounter with it. It was only my direct encounter with the retouched Berliner Bild-Bericht that made me aware of these viewing modes and of the way in which they become manifest. In the case of the 'invisible' retouched photographs, the vision is direct, immediate and framed, as the *before* and *after* images can be experienced only in the same way that they have been in the repeated photo-reproductions as they appear in journals and architecture books – in other words, only as mechanical reproductions.

In the case of the 'visible' retouched photographs, a different kind of vision manifests itself, one that addresses the consciousness – and unconsciousness – of the viewing subject, in the process leading to the discovery of an optical pleasure. This is the pleasure of viewing the image's retouching, of witnessing the labour involved in it, of touching it, of experiencing the photograph as a drawing, as a painting, and as the in-between of what has been, so far, a blind process or an 'invisible' intervention. Due to its material nature, this experience arguably

prompts a haptic way of seeing. In Rosalind Krauss's words, this is a mode of 'vision in touch' and of 'anti-vision' that defies a characteristic modernist form of viewing.[33] It is a way of seeing that goes beyond the visual and that, as John Berger argued, takes place in the process of exchange between the image and the viewer.[34] As in Krauss's optical unconscious, my encounter with the retouched photograph involved not only the body of the object but also the body of the subject as participants in the process of perception. Here the optical unconscious acts almost as a response to Robin Evans's comment about the Berliner Bild-Bericht: the photographs of the Pavilion 'always draws us away from consciousness of it as a thing, and draws us towards consciousness of the way we see it'.[35]

Furthermore, the optical unconscious also proves useful to understand the spacing of the retouched Berliner Bild-Bericht and, therefore, their relation to the other prints. In his 1936 'Artwork essay', Benjamin refers to the optical unconscious as the stretching of time and space through the camera eye that allows new modes of movement to be seen. Referring to Eadweard Muybridge's sequential photographs of movement (see Figure 6.18), Benjamin commented:

> [a] space informed by human consciousness gives way to a space informed by the unconscious. Whereas it is a commonplace that, for example, we have some idea what is involved in the act of walking (if only in general terms), we have no idea at all what happens during the split second when a person actually takes a step. We are familiar with the movement of picking up a cigarette lighter or a spoon, but know almost nothing of what really goes on between hand and metal...[36]

[33] Rosalind Krauss, *The Optical Unconscious* (Cambridge, MA, and London: MIT Press, 1994), pp. 2, 7, 22. See also Hans Belting's anthropological research on the photographic image as one that necessarily implies notions of tactility: Hans Belting, *An Anthropology of Images: Picture, Medium, Body* (Princeton: Princeton University Press, 2011).
[34] John Berger, *Ways of Seeing* (London and Harmondsworth: British Broadcasting Corporation and Penguin, 1972).
[35] Evans, 'Mies van der Rohe's Paradoxical Symmetries', pp. 56–68.
[36] Walter Benjamin, 'A Short History of Photography', in *Classic Essays on Photography*, 4th edn (New Haven, CT: Leete's Island Books, 1980).

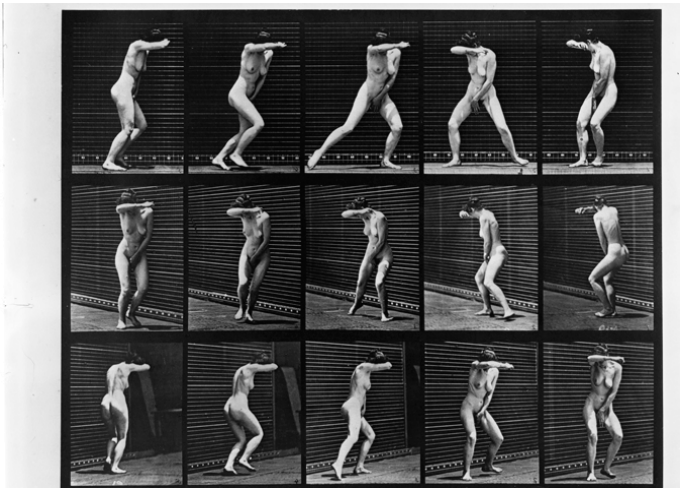


Figure 6.18. 'Woman turning around in surprise and running away', plate 73 from Muybridge's *Human Figure in Motion*. From Kingston Museum and Heritage Service, http://www.eadweardmuybridge.co.uk (accessed 15 August 2017).

It is this 'spacing' or 'distancing' that brings into consciousness the in-between condition of the retouched Berliner Bild-Bericht – in-between the *before* and *after* photographs.[37] Rephrasing Benjamin's statement: 'we are familiar with the Berliner Bild-Bericht prints and of the processes of retouching they have been subjected to, but know almost nothing of what really happened between the *before* and the *after*.' As in the 'visible retouched' photographs, by disrupting this superficial appearance our attention is drawn to our seeing and we are made conscious of it. We also become conscious of our resistance to the binary extremes to which Mies has subjected us as viewers. This spacing allows the insertion of the retouched print as an in-between condition of the retouched

[37] Brazilian writer and literary critic Santiago Silviano uses the term 'the space in between' initially in his essay 'Latin American discourse: The Space In-Between' when referring to the ideological transfers that constructed Latin America's (more specifically Brazil's) cultural identity. The space in-between is thus, for him, the space where critical discourse is constructed. See Santiago Silviano, *The Space In-Between: Essays on Latin American Culture* (Durham, NC, and London: Duke University Press, 2002). See also Elizabeth Grosz's proposition of an in-between as that which sits between the ideal and the material: 'The space of the in-between is the locus for social, cultural and natural transformations: it is not simply a convenient space for movements and realignments but in fact is the only place – the place around identities, between identities – where becoming, openness to futurity, outstrips the conservational impetus to retain cohesion and unity ... The space in between things is the space in which things are undone, the space to the side and around, which is the space of subversion and fraying, the edges of any identity's limits. In short, it is the space of the bounding and undoing of identities which constitute it': Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge, MA: MIT Press, 2001), pp. 91–92.

Berliner Bild-Bericht prints, thus prompting the construction of new critical discourses that, based on the encounter with a drawn photograph, are different.

Conversely, Michael W. Jennings has explored in his writings on Benjamin a clear relationship between Benjamin's optical unconscious and the problem of commodity fetishism; this, too, proves useful for a reading of the retouched photographs.[38] This links the idea of 'magic' with Benjamin's proposition of the optical unconscious: in his 'Little History of Photography', Benjamin claimed that the optical unconscious can mark 'the difference between technology and magic visible'.[39] By 'magic visible' is to be understood that which is made visible by its own volition. Yet it is the word 'magic' that points to this close relationship between the optical unconscious and commodity fetishism – and it is a word rooted in the origins of photography itself.

William Fox Talbot, arguing for the objectivity of photographic prints and their process of being made, argued for photography's natural magic. With his invention, his description of photography as the 'pencil of nature', and his suggestion that the subject of a photograph has 'drawn its own picture',[40] Talbot claimed that 'the most transitory of things, a shadow, the proverbial emblem of all that is fleeting and momentary, may be fettered by spells of our "natural magic"'.[41] For Talbot (and others among his contemporaries), 'magic' was a metaphor that described how, in photography, objects reproduced themselves in paper as if of their own will and with no labour involved. Even when referring to photography as a 'drawing with light', the word 'drawing' makes explicit reference to the labour involved in its production. Drawing upon Marxist theory, Steve

[38] See, for example, Howard Eiland and Michael W. Jennings, *Walter Benjamin: A Critical Life* (Cambridge, MA, and London: Harvard University Press, 2014); and Benjamin, *Selected Writings*, ed. Bullock and Jennings.
[39] Benjamin, 'A Short History of Photography'. See also Jane Rendell, *Art and Architecture: A Place Between* (London: I.B. Tauris, 2006).
[40] William Henry Fox Talbot, *The Pencil of Nature* (London: Longman, Brown, Green, and Longmans, 1844), introduction, n.p.
[41] William Henry Fox Talbot, *Some Account of the Art of Photogenic Drawing, or the Process by which Natural Objects may be Made to Delineate Themselves without the aid of the Artist's Pencil* (London: Printed by R. and J.E. Taylor, 1839), pp. 24–25.

Edwards has pointed out that 'natural magic' provided additional metaphors to the already existing ones that displaced labour from the scene of production, and that

> magic, necromancy, spells and alchemy are figures that the photographic literature shares with Marx, for whom they provide a language with which to describe the strange contortions that things undergo when they are subject to the law of value – that is, when they become commodities.[42]

The appearance of labour here – in the form of hand retouching – resists the processes of commodification that all other Berliner Bild-Bericht prints have been subjected to.

The significance of 'magic' as that which effaces all traces of labour, or as the absence of labour, is what the retouched Berliner Bild-Bericht testify against. It is the optical unconscious that here unveils the labour and the non-reproducible qualities of the craft of drawing. This further brings to the fore the ideological effects of the particular retouchings. Whereas nineteenth-century alterations are characterised by the will of making the pictures appear closer to life, twentieth-century alterations evidence a shift involving the realisation of the inherent distortions and idiosyncrasies of camera, an awareness of photographs as crafted artefacts, and, ironically, a renewed confidence in the ideal of authenticity and documentary truth – a concept that was emerging, in parallel, in photography's history, and which foregrounded processes of image alteration as ubiquitous, not only in architecture but in many other contexts.[43] The retouched Berliner Bild-Bericht prints explored in this chapter sit comfortably in-between: they transform or 'improve' a visible reality to make it appear as 'truthful'. As a result, they have acted as documents of the temporary building they portray (until their 'authenticity' was questioned in the 1990s). However, at the same time, they are material manifestations embodying a creative process that lies in the transformation of the camera image into a handcrafted image.

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[42] Steve Edwards, *The Making of English Photography: Allegories* (University Park, PA: Pennsylvania State University Press, 2006), p. 51.
[43] Mia Fineman, *Faking it: Manipulated Photography before Photoshop* (New Haven, CT, and London: Yale University Press, 2012).

Moreover, the optical unconscious also brings to the fore the relationship between commodification and 'social processes of observation' as they relate to the Pavilion. As Edwards also states: 'it is important to grasp that the fetishism of commodities, as much as it is an account of our relation to things – and it is certainly this – is also a description of a social process of observation.'[44] The retouched processes that the Berliner Bild-Bericht prints were subjected to imposed a way of seeing; thus, Mies – who controlled such processes – imposed a social, historical and ideological construct that we are all subjected to and have been perpetuating ever since.[45] However, the optical unconscious, and the experience of the retouched through the subjective form of vision it triggers and through the 'spacing' it entails, is as a productive tool for unveiling the labour involved. This tool enables a resistance to the image as a commodity. The optical unconscious also proves useful to defy the disciplined gaze and, therefore, Mies's 'authorship'. Moreover, it resists the male gaze as 'the established social and historical organization of looking, with its ceaseless reproduction of the subject in terms of mirror identity, unity, presence and mastery.'[46]

In this chapter I have discussed some of the issues that led me to think about the possibility of accessing an optical unconscious that dealt with the image's own ideological construction, that enabled me to question the image's objectivity, and that allowed me to find means to disrupt the repetition of the image. All this has entailed the question of subjectivity. Throughout this chapter, two different subjectivities have been manifest: one is contained in the photograph – the making of the image, the manual labour of the retouched Berliner Bild-Bericht effaced (as if it made them belong to the unconscious) in all repeated photo-reproductions; and the other comprised my own experience of encounter, which in this chapter I have described as intimate. As Lauren Berlant has remarked,

[44] Edwards, *The Making of English Photography*, p. 51.
[45] For the wider theoretical context, see Berger, *Ways of Seeing*; and Laura Mulvey, *Visual and Other Pleasures* (Bloomington: Indiana University Press, 1988).
[46] Miriam Hansen, 'Benjamin, Cinema and Experience: "The blue flower in the land of technology"', in Peter Osborne (ed.), *Walter Benjamin: Critical Evaluations in Cultural Theory*, vol. 2 (London: Routledge, 2005), pp. 277–78. For more detailed use of psychoanalysis in the understanding of the male gaze, see Laura Mulvey, 'Visual Pleasures and Narrative Cinema', *Screen*, (1975), reprinted in Mulvey, *Visual and Other Pleasures*, pp. 14–26.

> rethinking intimacy calls out not only for redescription but for transformative analyses of the rhetorical and material conditions that enable hegemonic fantasies to thrive in the minds and on the bodies of subjects while, at the same time, attachments are developing that might redirect the different routes taken by history and biography.[47]

Consequently, both subjectivities draw upon Benjamin's and Krauss's optical unconscious. Benjamin's concept allowed me to unveil issues related to ideology and the alteration of the images through the possibility of dissecting the photograph, and it suggested a reading of the retouched photograph that testifies against any 'magic' and, therefore, resists commodification; Krauss's concept allowed me to bring 'myself' into play through my intimate encounters with the photographs. These subjectivities are those which, in Michael Taussig's reading of Benjamin's optical unconscious, are 'opened up' as they allow us 'to explore ways in which the cultural, perspectival separation of viewer and viewed is undermined by its own secrets – the 'secret' of physiognomic tactility'. The 'secret', Taussig continues, 'is that the viewer and the viewed are entangled'.[48]

This chapter has also aimed to disrupt the understanding of the photographs through the oppositions that have normally been used: 'original/fake' and 'before/after'. Inserting the retouched photograph and talking about retouching as the 'in-between' process that responds to the 'spacing' proposed by Benjamin's optical unconscious, I aimed to divert this discussion by showing that it is possible to overcome this opposition when negotiating the gap between the photograph perceived at a distance and the viewer whose act of viewing affects it.

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[47] Lauren Berlant 'Intimacy: A Special Issue', *Critical Inquiry*, 24.2 (1998), p. 286. The intimacy with the retouched photograph was, therefore, what Carolyn Steedman describes as a moment of recognition that can take place when encountering archival material. There was a moment of interpretive understanding that I was seeing the objects in a new way and making new connections from the materials in front of me. See Carolyn Steedman, 'Intimacy in research: Accounting for it', *History of the Human Sciences*, 21.4 (2008), p. 28. See also Jacques Rancière, *The Names of History: On the Poetics of Knowledge* (Minneapolis: University of Minnesota Press, 1994); and Carolyn Steedman, *Dust* (Manchester: Manchester University Press, 2001).

[48] Michael Taussig, *Mimesis and Alterity: A Particular History of the Senses* (New York: Routledge, 1993) Quoted in Rebecca Schneider, 'The Secret's Eye', in *The Explicit Body in Performance* (London: Routledge, 1997), p. 89.

Finally, the insertion of a new photograph distinct in its materiality, and hence in its interpretation as an in-between iteration, is a new condition in the chain of repetition that the Berliner Bild-Bericht prints have been subject to. As I have argued in this chapter, this new condition produces a critical subjectivity.



Figure 7.1. Photograph by Herbert Matter or Charles Eames of Mies van der Rohe solo exhibition at MoMA in 1947; see the Pavilion's photomural as exhibition object. Source: Charles Eames, 'Mies van der Rohe', *Arts and Design,* December 1947.

7

Photographs of photographs: the photomural

'Using a new approach to the display of architecture, the photographs shown will be very large (the largest 20' x 14') and so arranged that they can be viewed from a distance to give the effect of *actual* buildings.'[1] With these words, Ada Louise Huxtable, the then assistant curator in the Department of Architecture at the Museum of Modern Art in New York, described Mies's selection of photomurals for his solo exhibition at MoMA in 1947 in terms of exhibition display and as a distinct mode of photographic reproduction. Stressing their originality, a press release on 17 September 1947 emphasised Mies's choice of display as 'free-standing walls ... – which have been thrown into one for this exhibition – ... enormous photomurals, several of them 20 by 14 feet'.[2]

Within the exhibition space, four of Mies's European works were displayed as free-standing floor-to-ceiling photomurals. This was a curatorial decision by the

[1] My emphasis in italics. Correspondence dated 23 July 1947, registrar's files, Museum of Modern Art, in Claire Zimmerman, *Photographic Architecture in the Twentieth Century* (Minneapolis and London: University of Minnesota Press, 2014), p. 299. Also referenced in Terence Riley, 'Making History: Mies van der Rohe and The Museum of Modern Art', in Riley et al. (eds), *Mies in Berlin* (New York: The Museum of Modern Art, 2002).

[2] 'Museum of Modern Art Presents Retrospective Exhibition of the Architecture of Mies van der Rohe', press release, 17 September 1947: http://www.moma.org/momaorg/shared/pdfs/docs/press_archives/1117/releases/MOMA_1946-1947_0100_1947-09-15_47915-37.pdf?2010 (accessed 8 December 2014).

architect himself.[3] These were the enlarged drawing of the Glass Skyscraper Project from 1922 and the Friedrichstrasse project of 1921, the Monument to the November Revolution (1926) and an interior view of the German Pavilion in Barcelona (1929), the latter one of the fifteen Berliner Bild-Bericht photographs. These free-standing photomurals were exhibited alongside three others hung on the gallery's outer walls. These other enlargements (though smaller in size) corresponded to the Concrete Office Building Project (1923), the Tugendhat house and the Mountain House studies (1934), and one design by Mies for a house in the Alps for himself (1933). Figure 7.2 shows the installation shots from 1947. Figure 7.3 shows in more detail the role of the Berliner Bild-Bericht enlarged photomural within the exhibition space.



Figure 7.2: Installation shots from Mies van der Rohe solo exhibition at MoMA, 16 September 1947–25 January 1948. Source: The Museum of Modern Art Archives. url: https://www.moma.org/calendar/exhibitions/2734?locale=en#installation-images (accessed 2 March 2018)

[3] A wall label in the exhibition confirmed his role: 'This exhibition, the first comprehensive retrospective showing of the work of Mies van der Rohe, is also the architect's latest design. He is responsible for the nature of the display, its plan, the appearance of the room in which you stand.' Quoted in Riley, 'Making History', p. 11.





Figure 7.3: Installation shots from Mies van der Rohe solo exhibition at MoMA, 16 September 1947–25 January 1948. Source: The Museum of Modern Art Archives. url: https://www.moma.org/calendar/exhibitions/2734?locale=en#installation-images (accessed 2 March 2018)

In an area of roughly 70 square feet, Mies's configuration of partitions that held the largest photomurals in place revolved as in a 'pinwheel fashion'[4] with no particular direction of circulation (see Figure 7.4). According to architectural historian Wallis Miller, who specialises on the architecture of exhibition spaces, this was an attempt to experience the portrayed buildings within the exhibition space as an embodied 1:1 experience, thus replicating their effect when physically existent or accessible – such as the German Pavilion in Barcelona (1929) – or as buildings within exhibitions – such as the one for the *Die Wohnung Zeit* (1931) (see Figure 7.5).[5] According to Miller, the encounter with the photomurals should replicate this experience, even though – for the first time – it is prompted by the encounter with a photographic surface of large dimension rather than with a building model.

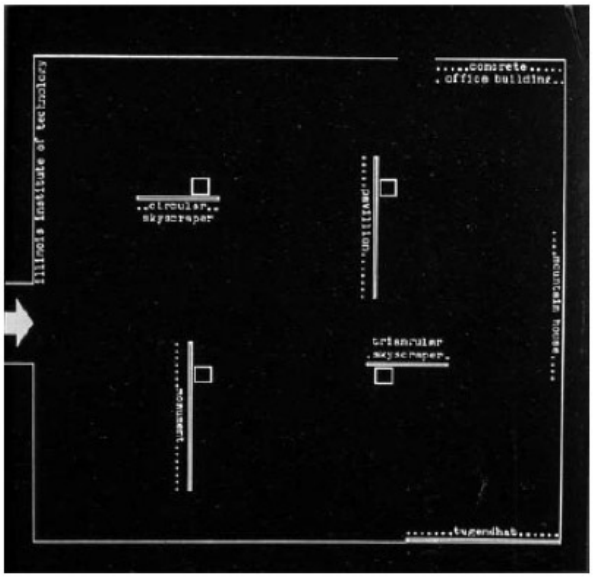


Figure 7.4. Plan of exhibition display by Charles Eames, focusing on the location of the photographic enlargements only. Along the walls starting at the left: IIT; above right: concrete office building; right: Neuchatel house; below right: Tugendhat. Standing photomurals: above left: circular skyscraper; above right: Pavilion; below right: triangular skyscraper; below left: movement. Source: Charles Eames, 'Mies van der Rohe', *Arts and Design*, December 1947.

[4] Riley, 'Making History', p. 12.

[5] For more on Mies's exhibitions, see Wallis Miller, Public lecture, American Academy Berlin, fall 2003, in Zimmerman, *Photographic Architecture*. Miller was also a contributor to the exhibition *Mies in Berlin*: see Miller, 'Mies and Exhibitions', in *Mies in Berlin* (New York: MoMA, 2001), pp. 338–49; and Miller, 'Fitting in: Architecture in the Art Gallery', in Robert Gutman, *Architecture from the Outside In* (New York: Princeton Architectural Press, 2009), pp. 86–94.



Figure 7.5. Mies's exhibition house at the *Die Wohnung Zeit*. Source: Digital image Mies van der Rohe/Gift of the Arch./MoMA/Scala (www.scalarchives.com).

The experience prompted by the encounter with these photomurals was translated by architects Charles Eames and Herbert Matter into a series of photographs later published in an article entitled 'Mies van der Rohe' in the journal *Arts and Architecture* in December 1947 (see Figure 7.6). In the article, Eames, who had visited the exhibition, emphasised the key role that the photomurals have within the exhibition space by mapping their location as if they were the only artefacts displayed within the room (see Figure 7.4). The article incorporates a series of photographs by Matter, shot any ordinary day, that aim to reproduce the experience of the visitor within the gallery space. The few words that accompany the images read:

> Certainly it is the experience of walking through the space and seeing others move in it that is the high point of the exhibition. It comes off wonderfully in so many ways ... In the simultaneous effect when natural perspective of the planes of the room are combined with the perspective and planes of the life-sized photographs.[6]

Eames's use of the words 'so many ways' seems to be a way of generalising a series of indescribable experiences that this encounter prompted. However, these words make clear that the exhibition, as the photograph reveals, was an experience that worked through juxtapositions, and that the agency of the visitor was key in unfolding this understanding. Yet by translating this experience

[6] Charles Eames, 'Mies van der Rohe', *Arts and Architecture*, December 1947, pp. 24–27.

through photographs, Eames's and Matter's shots suggest a different kind of experience: one that resembles Mies's montage strategies, that is only available to the reader of the journal, and that is disclosed through what Dziga Vertov and others have called 'the camera-eye'.



Figure 7.6. Charles Eames, 'Mies van der Rohe', *Arts and Architecture*, December 1947, pp. 24–27. Source: RIBA.



Figure 7.7. Charles Eames 'Mies van der Rohe', *Arts and Architecture*, December 1947, pp. 24–27. Source: RIBA.

This chapter will concentrate on one particular shot in which the blurry image of a woman appears in the centre, walking across the room, and is about to pass by either in front or behind the photomural of one of the Berliner Bild-Bericht photographs of the German Pavilion in Barcelona (see Figure 7.7). In Eames' article, this shot appears in the upper left corner of the second spread (see Figure 7.6). Here, Matter's photograph frames the Berliner Bild-Bericht as a perspectival enlargement, close to a 1:1 representation yet produced and exhibited as part of a temporary exhibition, and within the grounds of the Museum of Modern Art in New York.[7]

Matter's photograph is here the object of study as it is the one which does something different to the repeated photo-reproductions of the Berliner Bild-Bericht prints in books and journals, not through the photographic relay it proposes (as a photograph of a photograph that could therefore continue to be endlessly repeated), but as a photo-reproduction that embodies the 'contradictory scales of photography'.[8] As such, it offers the possibility of

[7] In this context, exhibiting a non-existent project as a photomural and within the context of an art and architectural museum not only legitimates it as a work of art – even more within MoMA, whose curating has always been driven by this object approach – but it also inevitably refers to the use of photomurals within exhibition grounds, as well to the exhibition of photographs (see Chapter Six, which discusses photographic exhibitions as being at the core of architectural dissemination). For exhibited photomurals, see Olivier Lugon's work on photographic enlargements and exhibited photographs as his ongoing research project, 'L'exposition moderne de la photographie', and particularly Lugon, 'Before the Tableau Form: Large Photographic Formats in the Exhibition Signs of Life, 1976', *Études photographiques*, 25 (2010): http://journals.openedition.org/etudesphotographiques/3440 (accessed 8 March 2017); and Lugon, 'The spatialisation of photography: Three exhibitions of the 1950s', in Nanni Baltzer and Martino Stierli (eds), *Montage Reader* (Zurich: Park Books, 2016). For more on architecture and photographic exhibitions, see Alona Pardo and Elias Redstone (eds), *Constructing Worlds: Photography and Architecture in the Modern Age* (Munich: Prestel, 2014); Eve Blau and Edward Kaufman, *Architecture and its Image: Four Centuries of Architectural Representation* (Montreal: Centre Canadien d'Architecture; Cambridge, MA, and London: MIT Press, 1989); Jean Back and Vitoria Schmidt-Lisenhoff, *The Family of Man 1955–2002: Humanism and Postmodernism: A Reappraisal of the Photo Exhibition by Edward Steichen* (Marburg: Jonas Verlag, 2004); Julie K. Brown, *Making Culture Visible: The Public Display of Photography at Fairs, Expositions and Exhibitions in the United States, 1847–1900* (Amsterdam: Harwood Academic Publishers, 2001); Thierry Gervais (ed.), *The 'Public Life' of Photographs* (Toronto: Ryerson University, 2006), Jorge Ribalta (ed.), *Public Photographic Spaces: Propaganda Exhibitions, from Pressa to the Family of Man, 1928–55* (Barcelona: MACBA, 2009); Mary Anne Staniszewski, *The Power of Display: A History of Exhibition Installations at the Museum of Modern Art* (Cambridge, MA, and London: MIT Press, 1998).

[8] This is a term used by Olivier Lugon to define the nature of photomurals as a form of photography that disrupts the usual sizes in which they were produced: see Lugon, 'Photography and Scale: Projection, Exhibition, Collection', *Art History*, 38.2 (2015), pp. 386–403.

revisiting a building almost thirty years after its dismantling. The photomural embodies its ephemerality and fragility; furthermore, it discloses the fragmentary though a unitary exhibition space as seen through the camera-eye,[9] thus replicating Mies's montage strategies.

7.1 Exhibited photographs, exhibited photomurals

The interest in the experience prompted by large-scale two-dimensional representations is evident from an early stage in Mies's career, both in drawings and photographs. The Bismarck Monument Project from 1910 is a large-scale drawing that measured over seven feet long, and the Office building in Stuttgart from 1928 measures 4½ feet (see Figure 7.8). The first ones known are eight large-scale photographs that Mies submitted to the first German Werkbund exhibition after the First World War: *Das deutsche kunstgewerbe in Jahr der grossen Parisier Ausstellung* (German Arts and Crafts in the year of the Great Paris Exhibition, 1925).[10] For this public exhibition, Mies proposed to exhibit in 1925 in Mannheim Kunsthalle and in Duisburg an enlargement of his glass skyscraper, as well as enlarged photo-reproductions of Mies and Reich's exhibition designs, such as the Electricity Pavilion for the 1929 Barcelona International Exhibition, where the use of large-scale photomurals by photographer Wilhelm Niemann was one of its main features (see Figure 7.12).

[9] For an understanding of the 'camera-eye', see Rosalind Krauss, 'New Visions – The Avant-gardes and After', in *Illuminations: Women Writing on Photography from the 1850s to the Present* (London: I.B. Tauris, 1996), pp. 90–91; Malcom Turvey, 'Can the Camera See? Mimesis in *Man with a Movie Camera*', *October*, 89 (Summer 1999), pp. 25–50. See also the work of the New Vision photographers like Umbo where the experience of the camera as prosthesis was the running theme. In literature, 'camera-eye' is a term used and investigated to explore the visual qualities of fiction in terms of the photograph and the moving image. John Dos Passos travels across the US in *Trilogy U.S.A.* has been repeatedly explored in these terms too, thus emphasising that it as an autobiographical framework created by the author himself, one which attempts to cover the subjective in order to make the trilogy appear to be objective. See, for instance, Alan Spiegel's *Fiction and the Camera Eye: Visual Consciousness in Film and the Modern Novel* (Charlottesville: University Press of Virginia, 1976).

[10] However, they were refused by the Stettin museum director Walter Riezler who would not give financial support for their enlargement. See Helmut Reuter and Birgit Schulte (eds), *Mies and Modern Living: Interiors, Furniture, Photography* (Stuttgart: Hatje Cantz, 2008), p. 221.



Figure 7.8. Large-scale drawings. On the left: Bismarck Monument Project from 1910; on the right: Office building in Stuttgart from 1928. Source: Digital image Mies van der Rohe/Gift of the Arch./MoMA/Scala (www.scalarchives.com)

Although by 1947 it seemed obvious that photographs would occupy a space within exhibitions as representational devices, this possibility has its own history. The practice of exhibiting photographs dates from the late nineteenth century and derives from the legitimation of the pictorial enterprise in which photographs were exposed as worthy to occupy an exhibition space. By then, and due to this exhibition strategy, photographs became an object of both collection and display, and they were 'consumed' by modes of public exhibition. These were indispensable qualities for the access to the economy of the beaux-arts, as photography historian Olivier Lugon has pointed out (see Figure 7.9).[11] This was the social and cultural context of the first photographic exhibitions prior to further technological developments in the early twentieth century that enabled enlargement and large-format photo-sensitive paper.

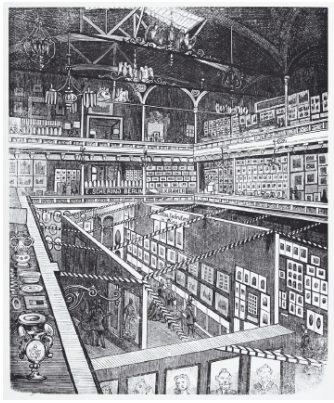


Figure 7.9. Second Internationale photographische Ausstellung (International Photography Exhibition), Berlin, 1865. Woodcut by J. Jamrath, in *Photographische Correspondenz* (Vienna, 1965), vol. 1. Source: Olivier Lugon, 'Photography and Scale: Projection, Exhibition, Collection', *Art History*, 38.2 (2015), p. 390.

[11] Olivier Lugon 'Entre l'affiche et le monument, le photomural dans les années 1930', in *Exposition et medias: Photographie, cinéma, television* (Lausanne: Editions L'Age d'Homme, 2012), pp. 79–124.

However, the logic of the 'easel' size is completely different to that of the photomurals; therefore, the trend towards the mural had strong political implications, as Lugon explains: 'to invest in the wall meant going beyond the idea of the work of art as a luxury commodity made for private scale and consumption, and thinking of art as having more of a social role.'[12] Frescoes, mosaics, printed canvases or monumental reliefs flourished in public buildings and as a display and exhibition of prestige.[13]


7.10


7.11



7.12


7.13

Figure 7.10. El Lissitzky with Sergei Senkin and others, 'Photofrieze', Soviet Pavilion, *Die Pressa*, Cologne 1928. Source: El Lissitzky letters and photographs, Special Collections, Getty Research Institute. Source: Olivier Lugon, 'Photography and Scale: Projection, Exhibition, Collection', *Art History*, 38.2 (2015), p. 393.
Figure 7.11. Exhibition of the Fascist Revolution, Palazzo delle Esposizioni, Rome, 1932. Source: http://grupaok.tumblr.com/post/66100800068/exhibition-of-the-fascist-revolution-mostra-della
Figure 7.12. Wilhelm Niemann, photomural, In the electricity Pavilion by Mies van der Rohe and Lilly Reich, Barcelona, 1929. Source: Berlinische Galerie, Archival ref. no. BG.FS.33/32.16
Figure 7.13. Entrance hall of the exhibition *Die Kamera*, 1933. Photomurals by Wilhelm Niemann, published in *Die Form: Zeitschrift für gestaltende Arbeit*, 8 (1933). Source: http://digi.ub.uni-heidelberg.de/diglit/form1933/0332/image

[12] Lugon, 'Photography and Scale', p. 392.
[13] Romy Golan, *Muralnomad: The Paradox of Wall painting, Europe 1927–1957* (New Haven, CT: Yale University Press: 2009).

According to art historian Romy Golan, the photomural is necessarily political. Its use as a means of reassurance and political persuasion aligned to distinct political regimes; as a response to either fascism and/or as experimental tools for the avant-gardes were the key uses within the European context. For example, photomurals were used within exhibition contexts by the Russian and German avant-gardes, such as the ones by the Dada (1920), the Novembergruppe in Berlin (1924–26), the Bauhaus (1925–30) and the Werkbund (1910s–1930s). One of the most well-known examples is the Bauhaus display by Herbert Bayer, where his *Diagram of Field of Vision* (1930) first materialised as part of a Deutscher Werkbund installation within the furniture and architecture gallery in the *Exposition de la Société des Artistes Décorateurs* (1930). Conversely, photomurals were also used as political tools. Some examples are El Lissitzky's Soviet Pavilion for the International Hygiene exhibition in 1930 (see Figure 7.10), Josep Lluis Sert's Spanish Pavilion in 1927, Giuseppe Terragni's Fascist Revolution Pavilion in Rome in 1932 (see Figure 7.11), and the representation of Weimar and Nazi Germany in the 1929 Electricity Pavilion in the International Exhibition of Barcelona (see Figure 7.12) as well as in the 1933 *Die Kamera* exhibition. Both the latter were presented through Wilhelm Niemann's atrium photomurals (see Figure 7.13).

Elaborating on Italian photomurals during the time of the fascist regime, such as the murals of the Mostra della Rivoluzione Fascista in Rome in 1932, and drawing upon the Italian, the USSR and the Germany Pavilions within the 1937 Paris fair, Golan argues that the photomural image is capable of reassurance about the social function of art and legitimation of the idea of the malleability of the collective. Photomurals were supported by the state and their ideologies, from the United States' New Deal to communist Soviet Union, Fascist Italy and Nazi Germany.

Historians have, according to artist and curator Jorge Ribalta, interpreted photomurals by emphasising either their 'political' or 'apolitical' status; in other words, the political status of the photomural has been the key issue of

contention in the historiography of their form. Though this terminology of 'apolitical' can itself be problematic – because there is no mediatic intervention aimed at the public and within institutional frameworks that can be thought of in such terms – Ribalta uses this controversial term to refer to the role the photomural plays when used within art museums and other cultural institutions.[14] This is the case with North America's early use of photomurals – and that coincides with Mies's arrival in Chicago. Photomurals were used as advertising tools for corporate buildings, as seen in the works of Steichen for Radio City (1932) and Margaret Bourke-White for NBC Studios in NY (1933) (see Figure 7.14), or as a pictorial media comparable to painted murals, as the 1932 exhibition *Murals by American Painters and Photographers* at the MoMA illustrates (see Figure 7.15). However, with their spread and popular use in the 1937 Paris World Fair, where photomurals were a commonplace covering kilometres of surface area, they came to be perceived as a vulgar form of mass communication and persuasion – in short, as propaganda.[15] Ribalta argues that this belief in the persuasive powers of photography, which was based on the belief in its 'universal language', turned photomurals into a constitutive element of modern public communication.[16] For Ribalta, the immediacy prompted by the photomurals contributed, paradoxically, to its artistic recognition as well as to its mass media affirmation. This echoes one of Walter Benjamin's concerns in 'The Author as a Producer': when photography's epistemological paradigm was based on the centrality of vision and dominated by a context in which, within the ideology of the modern capitalist state, photography promised an effective means of communication, then the viewers became collaborators.[17]

Photomurals also seemed to have been to communicate the concerns raised by the role of the US in World War Two. The photomurals used in exhibitions such as

[14] These two categorisations are taken from the work of Jorge Ribalta and Romy Golan.
[15] Pierre Liercourt, 'La photographie à l'Exposition 1937: le pavillon des Etats-Unis', *La Revue française de photographie et de cinématographie*, 18.426, 15 September 1937, p. 260, cited in Lugon, 'Photography and Scale', pp. 386–403.
[16] Jorge Ribalta, 'Introduction', in Ribalta (ed.) *Public Photographic Spaces*, p. 12.
[17] Walter Benjamin 'The Author as the Producer', address to the Institute for the Study of Fascism in Paris on 27 April 1934, in Benjamin, *Reflections: Essays, Aphorisms, Autobiographical Writings* (New York: Schocken, 1986), pp. 220–38.

Road to Victory (1942) (see Figure 7.16) and *Power in the Pacific* (1945) (see Figure 7.17) at the MoMA are examples. Both were curated by Edward Steichen, photographer, former Lieutenant and the then director of MoMA's photography department, and they were organised as propagandistic exhibitions at the request of the US government. They were constructed from archival photographs from the state and press agencies, whose original formats were 30 centimetres by 40 centimetres, and they were presented to the public in their enlarged versions as photomurals of 2.5 metres by 12 metres.[18] However, despite the museum's intention and Steichen's effort to turn them into photomurals, this might not be the most accurate description. It is striking how these photographs are made independent of the gallery walls: they always seem to be peeling away, or bridging junctions – thus actually separating themselves from the 'mural' surface.



Figure 7.14. 1932 photomurals by Margaret Bourke-White for the NBC studios at Rockefeller Plaza. Source: https://www.nytimes.com/2014/06/26/nyregion/at-30-rock-recreatig-a-rotunda-with-a-nod-to-the-past.html (accessed 6 June 6 2018).

[18] Ulrich Pohlmann, 'El Lissitzky's exhibition designs: The Influence of his work in Germany, Italy and the United States, 1923-1943', in Ribalta (ed.), *Public Photographic Spaces*, p. 189. Along with the criticisms derived from the use of photomurals as an innovative media within exhibition spaces, photographic exhibitions became relevant to the critique of modernism within art history discourses. See, for example, Rosalind Krauss, 'Photography's Discursive Spaces: Landscape/View', *Art Journal*, 42.4 (1982), pp. 311–19; Christopher Phillips, 'The Judgment Seat of Photography', *October*, 22 (Autumn 1982), pp. 27–63; and Benjamin H.D. Buchloch, 'From Faktura to Factography', *October*, 30 (Autumn 1984), pp. 82–119. These discourses have only recently begun to be explored in architecture.



Figure 7.15. Exhibition shot of *Murals by American Painters and Photographers*, May 1932. Source: http://spelunker.moma.org/exhibitions/2982/#img1 (accessed 6 June 2018).

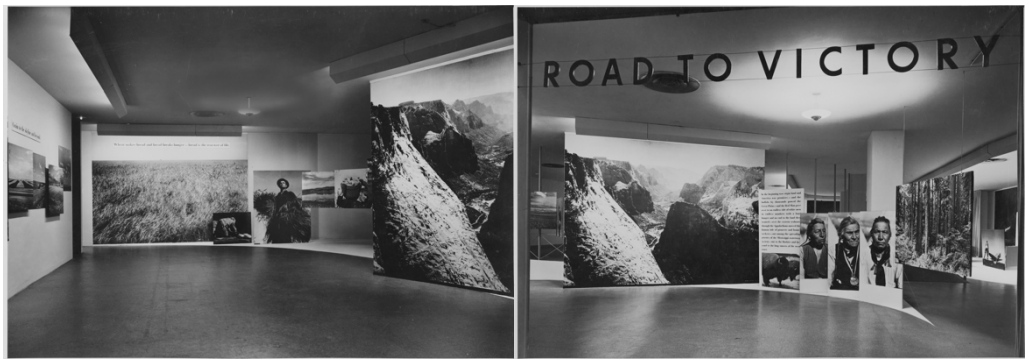


Figure 7.16. *Road to Victory*, 1942, installation shots. Source: The Museum of Modern Art Archives. https://www.moma.org/calendar/exhibitions/3038/installation_images/6 (accessed 6 March 2018).



Figure 7.17. *Power in the Pacific: Battle Photographs of our Navy in Action on the Sea and the Sky*. Source: http://spelunker.moma.org/exhibitions/3687/#img3 (accessed 6 June 2018).

It was Herbert Bayer (former Bauhaus photography instructor) who, after his emigration in 1938, started collaborating with MoMA in the design of exhibitions. He introduced the possibility of using the photomural as a sole standing exhibition device, and, importantly, of using architecture as one of its subject matters. Bayer was responsible for bringing into the museum grounds something which had hitherto been a tool for political persuasion. It is in this precise context that Mies's exhibition was grounded.

In 1937 Herbert Bayer published 'Fundamentals of Exhibition Design', in which he argued that the exhibited theme

> should not retain its distance from the spectator, it should be brought close to him, penetrate and leave the impression on him, should explain, demonstrate, and even persuade and lead him to a planned and direct reaction. Therefore we may say that exhibition design runs parallel with the psychology of advertising.[19]

In the final two pages of the article, after examining and proposing ground plans and directions, there are two subtitles that gain relevance for my reading of Eames's and Matter's photographs. The first is titled 'the movements of the individual', and the second 'the perspective of the individual' (see Figure 7.18).

In 'movements of the individual', Bayer emphasises how, in an exhibition, the object is fixed and the individual is in motion. In comparison to any printed media, the objects might not be arranged in close succession one after the other and in different pages, but rather are arranged to follow the visitor's course. In 'the perspective of the individual', he instead writes:

> the eye of man is fixed at an average distance from the floor. The field of vision has a definite size whose limitations are founded in the nature of the eye. By means of movement of the eye, of the head, or of the body, the field of vision is extended. It also becomes larger with increasing distance between the eye

[19] Herbert Bayer, 'Fundamentals of Exhibition Design', *PM (Production Manager)*, 6.2 (December 1939–January 1940), p. 17, reprinted in Ribalta (ed.), *Public Photographic Spaces*, pp. 211–19, at p. 211. See also Alexander Dorner, *The Way Beyond Art: The Work of Herbert Bayer* (New York: Wittenborn, Schultz, 1947) pp. 209–10.

and object. Normal sight is horizontal. Since, however, the perspective may be so greatly enlarged, there lies here an elementary motif of design. Up to the present time, it has been little used. The exhibition space is available to the individual eye and should obtain its forms from the qualities of the eye itself. This space is also mostly temporary, which fact differentiates it from the design of monumental buildings or homes.[20]

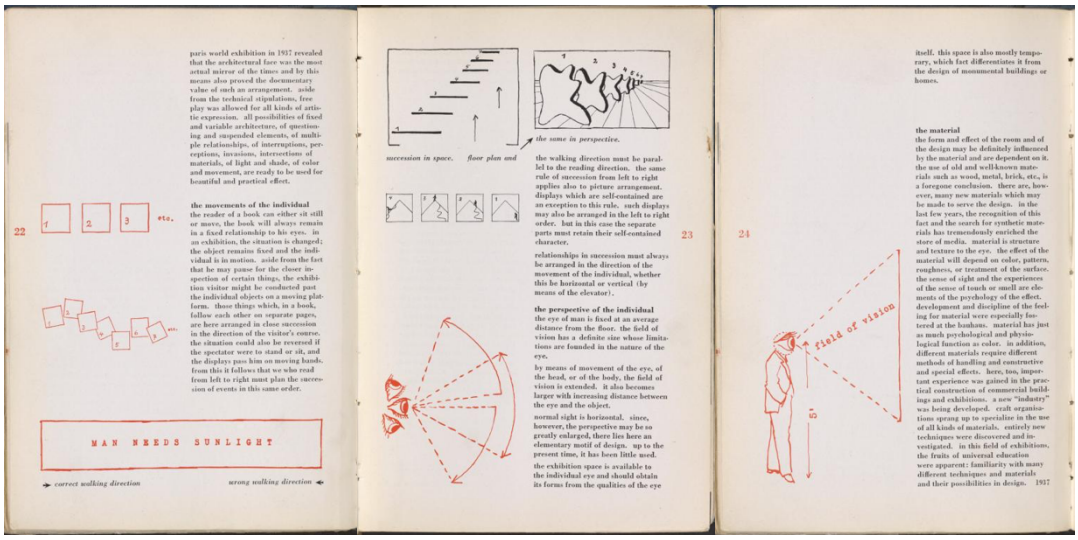


Figure 7.18. Double spread where 'the movements of the individual' and 'the perspective of the individual' appear in Herbert Bayer, *Fundamentals of Exhibition design*. Source: https://digitalcollections.nypl.org/items/90f27111-9714-4fc1-e040-e00a18064ba4. (accessed 6 March 2018).

It is interesting to note that for Bayer the underlying structure of the exhibition design was the relationship between the viewpoint of the individual and that which is exhibited. Conversely, Bayer proposed the use of enlarged perspectives as a possible motif of design. In all exhibitions housed at MoMA at this time, the role of perspectival large-scale photographs was always at the forefront and Mies's solo exhibition in 1947 was no exception. This explains the basis from which Bayer, and therefore MoMA operated, but furthermore how they provided the grounds for Mies's intervention – as well as for Mies's design.

[20] Bayer, 'Fundamentals of Exhibition Design', p. 17, in Ribalta (ed.), *Public Photographic Spaces*, pp. 217–18. See also: Wallis Miller, 'Points of View: Herbert Bayer's Exhibition Catalogue for the 1930 *Section Allemande*', Architectural Histories, 5(1) (2017). DOI: http//doi.org/10.5334/ah.221

7.2 *Bildarchitekturen*

The use of perspective as the underlying and rational ordering structure, its agency within architectural photography, and its agency in standing for or even replacing buildings has a longer history in Germany. Pictorial surfaces became of interest in the early twentieth century to a group of architectural historians interested in the phenomenon of *Bildarchitekturen*, or picture architecture.[21] This group of historians began to address the new pictorial consciousness that 'related the appearance of photographic reproductions in studies on architecture to the content of study itself: the pictorial surfaces of buildings'.[22] They did so in the decades following the beginning of the use of photographic reproductions in journals and other architectural publications and as a response to this printed dissemination. Despite their emphasis on the surface of the building as image, once reproduced photographically in mass media architectural journals it was the photograph – not the building – that became the surface.

In addition to the interest in pictorial facades of buildings that were photographed and reproduced, *Bildarchitektur* also referred to other sorts of architectural surfaces. Sigfried Kracauer, for instance, studied building surfaces in architecture, reading them as surfaces of immersion. This interest partially derived from Alois Riegl's investigation into and distinction between haptic and optic perception, and it was also informed by Wilhelm Worringer's *Abstraction and Empathy* (1908).

Kracauer was one of a group of historians, formed before the First World War, that focused on material objects, from cities to buildings, to two-dimensional representations and 'surface applications'. Zimmerman traces some of the early works of these group of critics when they had been students. She refers to Paul Zucker's 1912 dissertation, which explored the spatial effects of perspectival

[21] For a more in-depth exploration of this phenomena see the chapter *Bildarchitekturen* in Zimmerman, *Photographic Architecture*.
[22] Zimmerman, *Photographic Architecture*, p. 22.

wall painting from the Florentine Quattrocento; Adolf Behne's 1912 dissertation, which investigated the marble inlay in Italian medieval churches in relation to Peter Behren's crematorium in Hagen; and Paul Frankl's 1910 study on the painted glass in south German architecture.[23] In other words, Zucker researched pictures on architecture, Behne representational surfaces of buildings, and Frankl ephemeral architectural surfaces. These scholars turned their attention to surfaces that were both deep and shallow, both virtual and material. They looked with particular intensity at the surfaces of buildings insofar as they contained different kinds of images. But more importantly, they did so through the vehicle of photographs and photo-reproductions; and through an interest in how photography affected modes of attention in and for architecture, and in how the effects of photography reflected a new set of technical capacities and new ways of both seeing and conceiving space. Furthermore, these studies reflect the same set of concerns as those that photography had in the early twentieth century, and still has: building surfaces, and studies of the representation of architecture in two dimensions.

Also of interest here is the implicit relationship between building and surface, architectural space and architectural surface that *Bildarchitekturen* suggests. In every case, however, the architectural representation and the reality of the building are differentiated through the appearance of the surface. It is also significant that photography played a role as representation and surface, which meant that it could communicate the sense of flatness on the one hand and immersion on the other. No matter the object – for example, ornamental screens, painted wall murals, architecture inlay, glass painting – they were linked partly by how these became objects of modern historical attention as a result of photography and photomechanical processes.[24]

[23] Zimmerman, *Photographic Architecture*, p. 31. See also Kai Gutschow, 'The Culture of Criticism: Adolf Behne and the Development of Modern Architecture in Germany, 1920–1914', PhD thesis, Graduate School of Arts and Sciences, Columbia University (2005).
[24] *Bildarchitekturen* also related to the construction methods that at the time were starting to leave facades free to host images rather than to display tectonic necessities. However, for the purpose of this chapter, what is of relevance is how the cultural and historical background of the use of images altered the modalities of their use: photographs and buildings were seen in different ways.

7.3 Between collage and montage

There is one distinctive aspect in Matter's photographs that testify against *Bildarchitekturen* as a useful theoretical framework to understand Mies's photomurals and their insertion in the exhibition space. In the photographs, perspective and surface merge into a distinct mode of architectural representation that Mies widely explored: that of collage and montage. As mentioned previously, one of the reasons why the curatorial approach of the *Mies van der Rohe* exhibition of 1947 caused an impact was the ambiguous relationship between surfaces and space created by his use of full-sized photographs as montage elements inside the gallery space thus, 'pulling the exhibition space into his projects' and vice versa.[25] This outcome was one of the aims of Mies's curatorial approach, and it was the result of his continuous interest in reproduction technologies that sought to achieve it. The materialisation and presentation of the material echoed one of Mies's most laboured interests in photographic technologies of reproduction and immersive experiences, one that was reminiscent of the late nineteenth-century tradition (as in dioramas) and also echoed his *Bildarchitekturen* predecessors.

7.3.1 Patents of photographic wallpaper

On 12 March 1938, a patent was registered in Austria under Mies's name for a *Method for printing wallpaper*:[26] 'a process of printing rolls of wallpaper using photographic templates in half-tones and in the commercially standard graphic printing processes (relief, planographic, intaglio) while maintaining the finest

[25] Wallis Miller, 'Mies and Exhibitions', in Terence Riley et al., *Mies in Berlin* (New York: The Museum of Modern Art, 2002), p. 546.
[26] This was an 'application that claimed retroactive validation in the German Reich in March 12, 1937, suggesting a pro forma one-year preparation period in collaboration with a patent attorney': Dietrich Neumann, '"Wallpaper with arctic landscapes': Mies van der Rohe's Patents for Wallpaper Design and Printing Technology 1937–50', in Reuter and Schulte (eds), *Mies and Modern Living*, p. 265.

dotting as well as the customary print colors.'[27] The text of the patent explains the purpose of this procedure:

> This invention makes it possible to produce wallpaper having entirely new effects, in particular unprecedented effects of depths ... One special advantage of this process lies in the fact that no special wallpaper design need to be produced: instead, it can faithfully reproduce photographic imagery, which can now be utilized in wallpaper manufacture.[28]

Godfried Bueren, Mies's attorney explained the decisive difference from all previously known wallpaper patterns:

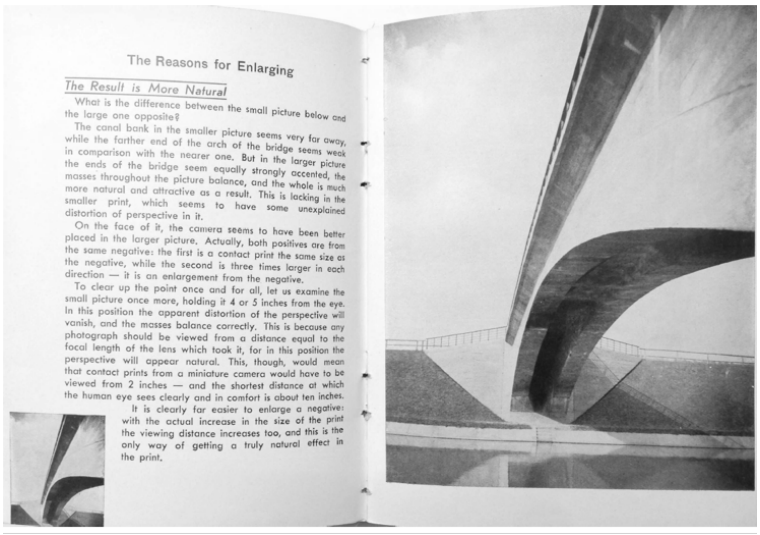
> [it] opened up hitherto unknown possibilities for shaping space while at the same time offering a highly realistic reproduction of imagery. ... It now becomes possible, for example, to place images of landscapes on a wall that visually dissolve its continuous surface, or to place perspectival images there, providing hitherto unknown effects of spatial depth. In this way, it becomes possible to endow smaller rooms with an impression of spaciousness, and vice versa. It also becomes possible, for example, to decorate a dark room – say, one facing north – with appropriately selected imagery in such a way that it is given a cheerful, sunny atmosphere ... To date, the wallpaper industry has not made use of any of these possibilities ...[29]

Yet, despite all efforts, Dietrich Neumann, when comparing Mies's 1947 exhibition with the possibilities of the patent suggested that 'this installation remained remarkably restrained'.[30]

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[27] Patent specification no. 158059 in the German Reich, Reichspatentamt (Imperial Patent Office), Austrian branch office, issued on 11 March 1940, quoted in Neumann, '"Wallpaper with arctic landscapes"', p. 265.
[28] Quoted in Neumann, '"Wallpaper with arctic landscapes"', p. 265.
[29] Godfried Bueren in a letter to Ludwig Mies van der Rohe dated 10 October 1939, LoC. MvdR, Box 48, Patent nos. 242.480 and 252.654; Fesit, Henry K, Patents General 1938–47; quoted in Neumann, '"Wallpaper with arctic landscapes"', p. 269.
[30] Neumann, '"Wallpaper with arctic landscapes"', p. 275. This was one of the many patents that Mies registered in Austria, Switzerland, Germany and the US. For example: the patent US 2532585 A, serial no. 679,308, application date 26 June 1946, approved 5 December 1950: 'Apparatus for the production of dot-composed negatives', L.M. Van der Rohe et al. However, this one in particular was registered in different countries: Patent Nr. 220769, Klasse 49d, accepted 16 July 1942: 'Process for the manufacture and production of screening'; Schweizerische Eidgenossenschaft, application date 24 January 1939, Prof. Ludwig Mies van der Rohe, Berlin (Deutsches Reich). Patent Nr. 737591, Klasse 57d, Gruppe 7, accepted 16 July 1943: 'Process for the photographic production of larger screenings and respectively larger halftone'; Ludwig Mies van der Rohe and Walter Peterhans in Chicago, Lilly Reich in Berlin. Patent nr. 835.138, Gr. 4, Cl. 2, accepted 13 December 1938: 'Process of the fabrication of halftone imprints', M. Mies van der Rohe resident en Allemagne. Retrieved from: https://worldwide.espacenet.com/ (accessed 15 July 2015).

The purpose behind the development of these mechanical means of photographic reproduction was to achieve a more natural result, as explained by Walter Peterhans, former tutor and founder of the photography course at the Bauhaus Dessau in 1929, and co-author of the former patent, in his pamphlet *How to enlarge*. The patent focused on the development of a geometric grid to guarantee that the perspective of the photographic reproduction being enlarged was maintained and not distorted; the flat aperspectival grid was necessary to underpin and anchor the perspectival effect that would guarantee a 'natural' result.



The Reasons for Enlarging

The Result is More Natural

What is the difference between the small picture below and the large one opposite?

The canal bank in the smaller picture seems very far away, while the farther end of the arch of the bridge seems weak in comparison with the nearer one. But in the larger picture the ends of the bridge seem equally strongly accented, the masses throughout the picture balance, and the whole is much more natural and attractive as a result. This is lacking in the smaller print, which seems to have some unexplained distortion of perspective in it.

On the face of it, the camera seems to have been better placed in the larger picture. Actually, both positives are from the same negative: the first is a contact print the same size as the negative, while the second is three times larger in each direction — it is an enlargement from the negative.

To clear up the point once and for all, let us examine the small picture once more, holding it 4 or 5 inches from the eye. In this position the apparent distortion of the perspective will vanish, and the masses balance correctly. This is because any photograph should be viewed from a distance equal to the focal length of the lens which took it, for in this position the perspective will appear natural. This, though, would mean that contact prints from a miniature camera would have to be viewed from 2 inches — and the shortest distance at which the human eye sees clearly and in comfort is about ten inches.

It is clearly far easier to enlarge a negative: with the actual increase in the size of the print the viewing distance increases too, and this is the only way of getting a truly natural effect in the print.

Figure 7.19. Double spread from Walter Peterhans, *How to Enlarge* (London: Sands, Hunter & Co., 1937), cover and p. 4. Source: British Library.

Peterhans further explained this using two photographs of different sizes on opposite pages of the pamphlet. He asks: 'What is the difference between the small picture below and the large opposite?' He provides the following answer:

> The canal bank in the small picture seems very far away, while the farther end of the arch of the bridge seems weak in comparison with the nearer one. But in the larger picture the ends of the bridge seem equally strongly accented, the masses throughout the picture balance, and the whole is much more neutral and attractive as a result. This is lacking in the smaller

> print, which seems to have some unexplained distortion of perspective in it.[31]

Peterhans states that 'the camera seems to have been better placed in the larger picture',[32] and that the apparent distortion of the perspective will vanish and the masses will balance correctly. From a technical perspective, any photograph should be viewed from a distance equal to the focal length of the lens which took it, for in this position the perspective will appear naturally (see Figure 7.19).[33]

Considering how this was experienced in the 1947 exhibition, it is possible that the fidelity Mies and Peterhans aimed to achieve with a 'faithful' enlargement of a perspectival photo-reproduction prompted, mainly, a disruption. What Eames and Matter's photograph unveils is the distance between object and viewer that this multiplicity of representational surfaces creates: a distance that can only be experienced through their 'camera-eye'; a distance that, as Zimmerman argues, is not only made up of time (early twentieth century, and exhibited in the 1950s) and geography (Europe, exhibited in North America), but also of politics and history (Weimar Republic). This distance makes the object – here the 1929 German Pavilion – inaccessible. The photograph of the photomural within the 1947 exhibition evidences a staged confusion between representational surfaces, performative spaces. The walking woman and the dialectical effect of assertion and collapse of perspective and scale operates in the oscillation of singular images and in the way the photomurals are organised in the space. This staged confusion, and the elements that constitute it, are reminders of Mies's strategies of architectural collage and montage.

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[31] Walter Peterhans, *How to Enlarge* (London: Sands, Hunter & Co., 1937), p. 4.
[32] Peterhans. *How to Enlarge*, p. 4.
[33] Peterhans continues: 'It is clearly far easier to enlarge a negative: with the actual increase in the size of the print the viewing distance increases too, and this is the only way of getting a truly natural effect in the print': *How to Enlarge*, p. 4.

7.3.2 Between collage and montage

In general terms, photomontage as a term responds to its invention by the Berlin Dadaists after World War One, in clear opposition to collage and in clear embrace of the new possibilities of mechanical reproduction.[34] Collages include heterogeneous materials and external objects that indicate, as Ulrich Weisstein argues, a 'fundamental crisis of representations, directly presenting fragments of reality rather than representing them'.[35] Montage, on the other hand, is usually made up of photographic representations; hence, in art historian Martino Stierli's words, 'it embraces representation, albeit in an altered sense.'[36]

Mies's use of collage and montage has been widely examined by scholars such as Stierli and Andres Lepik. For Stierli, the difference between collage and montage in Mies's work is not clear cut, since his work falls into both categories. Interestingly, both collage and montage are counter-concepts to perspectivalism, which Mies's photomurals, in a clear modern stance, reveal. For Dadaist artists, photomontages were not only a means to represent the industrialised metropolis and its fragmented perception but were also a model for the production of meaning.[37] For Mies, in contrast, photomontages remained as a tool for illusionistic perspectivalism and the creation of an apparent reality of a specific physical space. This is also an understanding closely related to August Schmarsow's empathy discourse in which perception and experience of architecture is solely related to a perspectival cognition of space. This is made evident in Mies's early twentieth-century architectural photomontages, since they generally aimed to achieve a visualisation of the surrounding context by integrating rather than contrasting, as in the two Berlin glass skyscrapers from

[34] It is worth noting, however, that photographic montages existed from the inception of photography in the mid-nineteenth century.
[35] Ulrich Weisstein, 'Collage, Montage, and related Terms: Their Literal and Figurative Use in and Application to Techniques and Forms in Various Arts', *Comparative Literature Studies*, 15 (1978), pp. 124–39.
[36] Martino Stierli, 'Mies Montage', in *AA Files*, 61, p. 64. See also Sergei Eisenstein, 'Collision of Ideas: "Montage is Conflict"', in *En Film: A Montage of Theories* (New York: E.P. Dutton, 1966), pp. 34–37; and Sergei Eisenstein, *Film Form: Essays in Film Theory* (London: Denis Dobson, 1963).
[37] Stierli, 'Mies Montage', p. 66.

the 1920s (see Figure 7.20). Yet in this case, there are two evident contrasts that could suggest an understanding of these images as a collage: first, the contrast caused by the representation media, namely a drawing over a photograph; and second, the historical and architectural contrast manifested by the insertion of a drawn glass skyscraper in the photographed old town of Berlin.



Figure 7.20. Above: Modell für ein Hoch haus am Bhf Fridrichstrasse, 1922. Archiv Nr. 6-F-8529, Inv Nr. I7677F / Archiv Nr. 6-F-008528, Inv Nr: I7676F / Archiv Nr. 6-F-008531 Inv Nr. I7679F. Source: Bauhaus Archiv, Dessau. Below: detail of snapshots trying to capture the material qualities of the montage.

On the other hand, Mies's late 1930s photo-collages, such as the ones for the Resor House Project of 1938, shift the view from the exterior appearance of the building (a view characteristic of his early photomontages), to an interior framed view where the use of linear perspective clearly contrasts to the refracted

spatiality of the earlier avant-garde (see Figure 7.21). The photo-collages can therefore be understood as perspectives from within the house's living room viewpoint. Lines indicate the spatial confinements, rendering an almost invisible architecture. As in the traditional perspective of early modernity, for Mies the goal is to achieve virtual depth through photographic landscapes inserted as exterior views and merged together with solid dividing walls of different historical times, geographic spaces, and haptic qualities. The photograph here becomes a wall and performs as a pictorial surface.

In the Resor House photo-collages, foreground becomes background and vice versa. As architectural historian Neil Levine argues, the negative spaces created by the blank vertical lines of the cruciform-shaped columns and the horizontal planes of floor and ceiling provided the bi-dimensional ground for the free-standing objects in the room, and that the photographic images hermetically seal the landscape, bringing it to the inside.[38] In other words, the photographs act both as an exterior view of Wyoming's landscape and as one of the floating walls in the interior, thus creating a photo-collage in a similar way to how the photomurals are seen within the MoMA exhibition space in Eames and Matter's depictions of 1947. In a characteristic Miesian approach, the photographs act as pictorial frames rather than as volumes.[39]



Figure 7.21. Photo-collages of Resor House, 1939. Interior perspective of living room and south wall on the left, perspective and view of site from interior. Source: https://www.moma.org/ (accessed 1 March 2018).

[38] Neil Levine 'The Significance of Facts: Mies's Collages up Close and Personal', *Assemblage*, 37 (December 1998), p. 79. See also Neil Levine, *Modern Architecture: Representation and Reality* (New Haven, CT: Yale University Press, 2009).
[39] Martino Stierli, *Montage and the Metropolis: Architecture, Modernity, and the Representation of Space* (New Haven, CT, and London: Yale University Press, 2018), p. 145.

Moreover, as in any collage, the layering present in Resor House voices the distinctive strategy of collage-as-technics, a strategy also visible in the layering of the exhibition space. Perspective is in this case the means to arrange flat pictorial surfaces in space and in a parallel order: the frontality of the dividing walls reinforces their two-dimensionality while at the same time emphasising the perspectival view of the photomurals. Likewise, it is difficult to categorise the exhibition space as unveiled in Matter's photographs as 'either/or'. Yet if we translate this into the exhibition space, there is a slight though significant variation. Whereas in Mies's photo-collages the pictorial surfaces are frontally displayed, in the 1947 photograph they appeared skewed, thus revealing the depth of the exhibition space and emphasising its three-dimensionality despite the bi-dimensional pictorial walls. The fact that the photomurals – as standing walls – appear skewed also brings to the fore the frame of the photomural as a photographic representation, just as the frame of the photomural as a standing wall is captured in Matter's photograph. Furthermore, they are framed by the surfaces of the ceiling and the floor in the gallery room. All these operate as framing devices that problematise the understanding of a 1:1 experience of the portrayed building, since it locates it within the exhibition space. This, in particular, can only be disclosed by the camera-eye; it is a space that, Rosalind Krauss argues, makes itself manifest by the appearance of the photographic frame. For Krauss, 'photographic cropping is always experienced as a rupture in the continuous fabric of reality.' The frame, Krauss continues, 'announces that between the part of reality that was cut away and this part there is a difference; and that this segment which the frame frames is an example of nature-as-representation, nature-as-sign.'[40] The frame signals the experience of reality that the camera frame has controlled and configured.

Yet this distinct mode of vision was already established throughout Europe in the 1920s and 1930s, and it was named as 'New Vision' by Moholy-Nagy. For Moholy-

[40] Rosalind Krauss, 'New Visions: The Avant-gardes and After', *Illuminations: Women Writing on Photography from the 1850s to the Present* (London: I.B. Tauris, 1996), p. 89; originally published as 'Photographic Conditions of Surrealism', in *The Originality of the Avant-garde and Other Modernist Myths* (Cambridge, MA, and London: MIT Press, 1985), pp.87–116.

Nagy, the human eyesight is defective, weak and impotent. Camera-eyes 'see faster, sharper, at stranger angels, closer-to, microscopically, with a transposition of tonalities, with the penetration of X ray'.[41] And camera-seeing, by supplementing the deficiency of the naked eye, is thus an extension of normal vision: the camera acts as a kind of prosthesis that enlarges the capacity of the human body. Moreover, as a prosthesis, the camera mediates the ways in which the world is present to that vision by getting between the viewer and the world. This is what Matter's photographs disclose. And, as Krauss argues, the photographs shape reality according to their own terms.

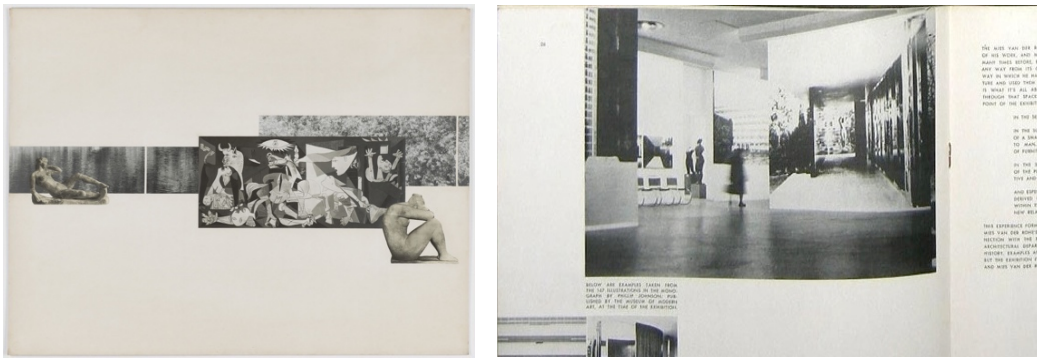


Figure 7.22. Right: Ludwig Mies van der Rohe Museum for a Small City Project, Interior perspective, 1941–43. Source: https://www.moma.org/ (accessed 1 March 2018). Left: Detail of Eames and Matter's photograph.

Returning to Herbert Matter's photograph, it is arguable that photo-collage strategies are evident in the blend of objects of different scales in the same image with the dividing walls (see Figure 7.22): the photomural of the German Pavilion in Barcelona welcomes the visitor together with an enlargement of the freehand sketch of the Project for a Mountain House (1934). At the right, there is an enlarged image of the Friedrichstrasse competition glass skyscraper (1921), and at the left there is an enlarged photograph of the second Berlin glass skyscraper model (1922). In one corner, there are two sculptures silently standing between a tableau format Berliner Bild-Bericht and an enlarged

[41] Krauss, 'New Visions', p. 89.

photograph of Mies's Concrete Office Building, thereby resembling the inclusion of the sculptures in Mies's collage for the Museum for a Small City Project (1942) (these do not appear in any of the exhibition shots, nor are they in either of the two exhibition plans; instead, they belong to an exhibition in the adjacent room). In the same way, and as depicted in Matter's photographs, furniture in the gallery appears before the photomurals of the Tugendhat house and the Friedrichstrasse skyscraper from 1921. At the back end of the gallery, the furniture is superimposed over the Tugendhat photomural as well as over the visitors in between. It is the appearance of the skewed photomurals and the inclusion of furniture that makes this photo-collage inhabitable and site-specific. Terence Riley has compared this installation to 'the images of Picasso's *Guernica* (1937) in the Museum of the Small City Collages', described it as a bi-dimensional collage in itself due to the 'collage-like appearance' of the attached photomurals on one side of the wall partitions (see Figure 7.1); however, when considering the photo-collage as a product of 'studied excisions and additions that must be looked at both as a whole and in part',[42] this bi-dimensionality proves to be impossible.

Yet this is the same contrast that allows the exhibition space to be thought of as a photomontage. Whereas the photo-collage is possible due to the layering of photographic surfaces and the different materialities, all of which are enhanced by the interior perspectival view as in Mies's early photo-collages, the photomontage is possible due to the seamless surface of the photographic reproduction where the perspectival spaces of the photomurals meld with the spaces of Eames's photographs. In other words, the photographic representations of the exhibition by Eames and Matter double Mies's photo-collages (by making of the photomurals interior dividing walls that contrast with other objects) *and* photomontages (as the photomurals merge with the visitor, and the scale of the photographs as photomurals enhances a different reality, blurring what is real and what is not). Significantly, in both cases there is a sense

[42] Riley, 'Making History', pp. 12, 15.

of physical disorientation, a characteristic of collages and montages, which is prompted by the deliberate play on distance and perspective as seen in the enlarged Berliner Bild-Bericht.[43]

7.4 Inhabitation

Describing the appearance and experience of the Berliner Bild-Bericht photomural within the 1947 exhibition has been a matter of renewed interest because it is one of the few photographic reproductions that gives a sense of the photomurals within the exhibition space. Zimmerman uses it as the conclusion to her book on *Photographic Architecture*. Under the subtitle 'surface divides', Zimmerman argues that the presence of the photomurals within the exhibition space 'underscore the fact that architectural media were in some sense *indistinguishable* from full-scale building'.[44] Yet if photomurals could exist within the gallery space, they cannot be buildings. Furthermore, for Zimmerman, the inclusion of such enlarged photographic depictions illustrates the productive exchange between photographs as commercial/advertising instruments and photographs as cultural products: the photographs are a crossover between commodity and art. For Riley, however, Matter's photographs essentially operate as a perspectival collage – the impossibility of which I have already argued. For Miller, it is significant for its confusing visuals, and so it embodies the experience of an overlap of a perspectival pictorial surface within the space of the gallery. Lastly, for Stierli, 'the large format, the *forme tableau*, the use of perspective, and the reality effect produced by photography all serve to simulate an urban experience within the gallery space'.[45] This multiplicity of arguments points towards the imminent spatial confusion that the exhibition shots prompt. Yet there is still one determinant element within Matter's photographs that has not been taken into consideration: the passing woman.

[43] Levine 'The Significance of Facts', p. 79.
[44] Zimmerman, *Photographic Architecture*, p. 301.
[45] Stierli, *Montage and the Metropolis*, p. 146.

Returning to Eames, in line with the description of the 'simultaneous effect when natural perspective of the planes of the room are combined with the perspective and planes of the life-sized photographs',[46] visitors become part of the stage set by Mies as an exhibition space. As acknowledged by Eames, the visitor's bodily experience is that of inhabiting a photo-collage. At the same time, the physical presence of the photomurals within the exhibition's photographic representations is that of both: a photomontage and a photo-collage. It is the alienation of this human presence, merging, contrasting and almost inhabiting the enlarged perspectival photographs, that problematises this experience as one between collage and montage. It is the perspectival view(s) that prompts this to happen.

Within modern architectural photographic discourses, human scale and human figures have always been avoided; they are absent from all photographic representations. Buildings need to be portrayed bare and empty. The Berliner Bild-Bericht testify to this: the only photographs authorised for public dissemination have no visitors, and one of the few that had – in which a woman standing and facing one of the glass surfaces is portrayed – appeared only once in the exhibition's newspaper (see Figure 7.23).



Figure 7.23. Only photograph from 1929 where the Pavilion appears inhabited by a woman. *Diario Oficial de la Exposición Internacional de Barcelona 1929*, 12 (2 June 1929). Photographs from the German Pavilion by 'A' (anonymous). From Josep Quetglas's and Ricardo Daza's personal archive.

[46] Eames, 'Mies van der Rohe', pp. 24–27.

The presence of a blurry woman in the 1947 exhibition space is therefore a contradiction, as modern architectural discourse and the repeated photo-reproductions testify is that neither the Pavilion nor the Berliner Bild-Bericht were ever inhabited. Her presence – in movement – disrupts, and her motion contrasts. If Mies's montage strategies are disclosed by the camera-eye, then they are further magnified and problematised by the presence of visitors. The woman's presence brings into play a specificity of time and space that echo Zimmerman's 'distancing' argument, and they also demonstrate my argument about the inaccessibility of the photomurals. The woman is walking on the exhibition's floor, which through the eyes of the camera appears as a different perspectival surface to that of the Pavilion. This again manifests the impossibility of a 1:1 experience of the Pavilion, or of an immersion in it. Her presence reveals that the perspective of the room and of the planes of the room cannot merge, as Eames describes in his 1947 article, and which constitute, in Miller's words, a 'vis-à-vis relationship'; and her presence also reveals that the photographic frames – both Matter's and the Berliner Bild-Bericht – are what prevent this merging from happening. Furthermore, the blurring of the female figure introduces the temporality of the moment of photographic capture as much as exhibition. It demonumentalises the static architectural qualities of the scaled-up photomurals, which is part and parcel of their misrecognition as 'the building itself', and this is heightened by the juxtaposition of the moving living female figure and the petrified statue at the back (see Figure 7.1).

In 'Fundamentals of Exhibition Design', Bayer emphasises the role played by the visitor-in-motion as a fundamental exhibition trope, since it is the eye of the visitor that will take in the qualities of the exhibition space. Yet, here, the woman's presence unveils that the eye of the visitor is not the same as the eye of the photographer who shot the Berliner Bild-Bericht print, and thus that their viewpoints – one of which is enlarged – do not coincide. In the same way, the woman's walking motion brings to the fore another aspect of the exhibition generally not attended to: its ephemerality – and not just the exhibition's ephemerality but also the ephemeral nature of the Pavilion and even of the

photomural itself as an exhibition object. The ephemerality of the photographic wallpaper is a determinant aspect of its reproductive nature, something which it shares with the magic lantern and other photographic projection technologies. Photomurals were made to be dismounted, as the German Pavilion was. They comprised long paper strips of photographic wallpaper; pasted rather than hung, and unprotected from crowds and light exposure, they were deliberately conceived to be thrown away after their intended use, in the same way that posters or commercial film reels are. What this implies is that photographs were printed specifically for public display and not for collection purposes. In other words, as Lugon explains drawing upon Benjamin, 'photography increased exhibition value while diminishing its collection value – a new form of instability with regards to the system of the arts in the twentieth century.'[47] It was this ephemeral nature that constitutes the photomural's modernity, acting as a response to capitalist logic, according to which everything is subsumed within renewal and obsolescence.

However, as this chapter has demonstrated, it is the camera-eye that discloses Mies's montage strategies and alludes to a myriad of ephemeralities; it is the camera-eye that, in an almost contradictory manner, freezes the moment in time and in space where the woman visits the exhibition space; it is the 'camera-eye' that situates the exhibition and the Berliner Bild-Bericht in a particular time and place, and that represent Mies's strategies photographically to a larger audience; and it is the camera-eye that, as a photo-reproduction undergoing photographic relay, appears fixed and repeated in architectural publication today and, like the Berliner Bild-Bericht prints, is accessible to readers sixty years after its publication. Here, it is the photograph of the photograph that can also be repeated. Yet, I argue, Matter's photograph still disrupts the canon and its repetition, since it inserts a different photograph into the discourse, reminding us that a canonical photograph is today known primarily through its reproductions:

[47] Lugon, 'Photography and Scale', p. 396.

it is present everywhere but always different, and it is in no way bound to a unique and stable scale or presentation.

8

Empty site photographs

In 1979, Ludwig Glaeser, the first curator of the Mies van der Rohe Archive at MoMA, curated the travelling exhibition *Mies van der Rohe, The Barcelona Pavilion, 50th Anniversary*. Not surprisingly, the pamphlet that accompanied the exhibition contains, as main representations, the 1929 canonical photographs, alongside one perspectival drawing and one plan of the building (see Figure 8.1).[1]

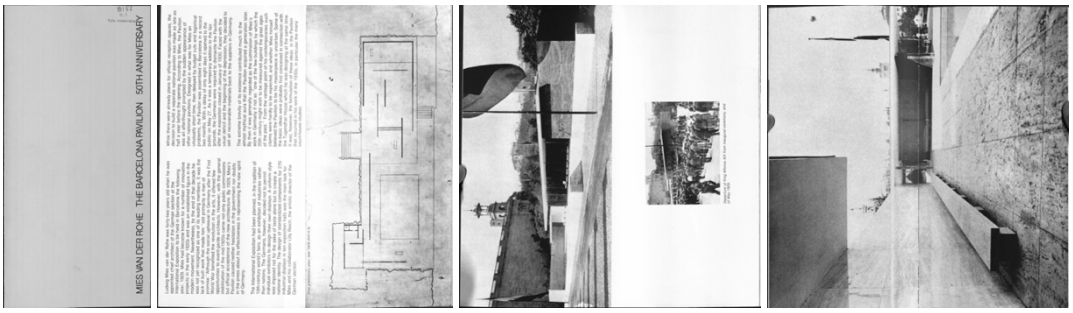
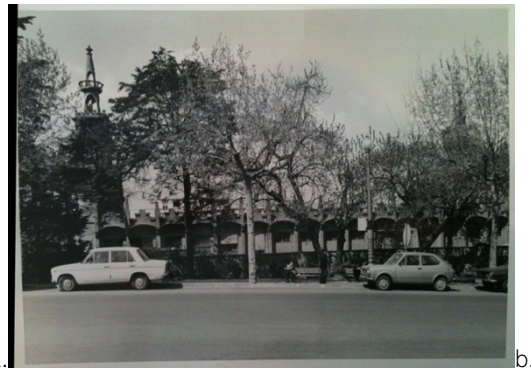


Figure 8.1. Double spreads of pp. 1–6 of *Mies van der Rohe. The Barcelona Pavilion. 50th Anniversary*, exhibition catalogue. Source: CCA Archive. Archival ref. 8152-C.1-Exh Washington.

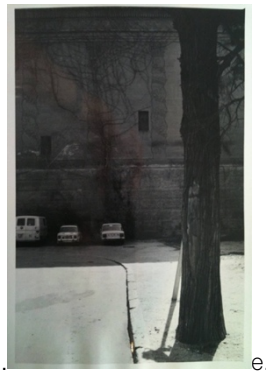
In 1979 Glaeser visited the site in Barcelona where the German Pavilion had been built fifty years previously, and where it had been dismantled eight months after its construction. Figures 8.2a-m are the remaining thirteen prints that Glaeser

[1] The pamphlet was published by the Friends of the Mies van der Rohe Archive in connection with the exhibition *Mies van der Rohe: The Barcelona Pavilion*, held on the occasion of the 50th anniversary of the German Pavilion at the International Exposition in Barcelona, Spain, at the National Gallery of Art, Washington D.C., from 14 October to 2 December 1979.

made and that today are kept in his personal archive at MoMA. Some try to capture the Pavilion's context; others focus on the dusty site where the Pavilion once stood. Yet they all search for an absent referent: the Pavilion.


a.

b.


c.

d.

e.


f.



g.



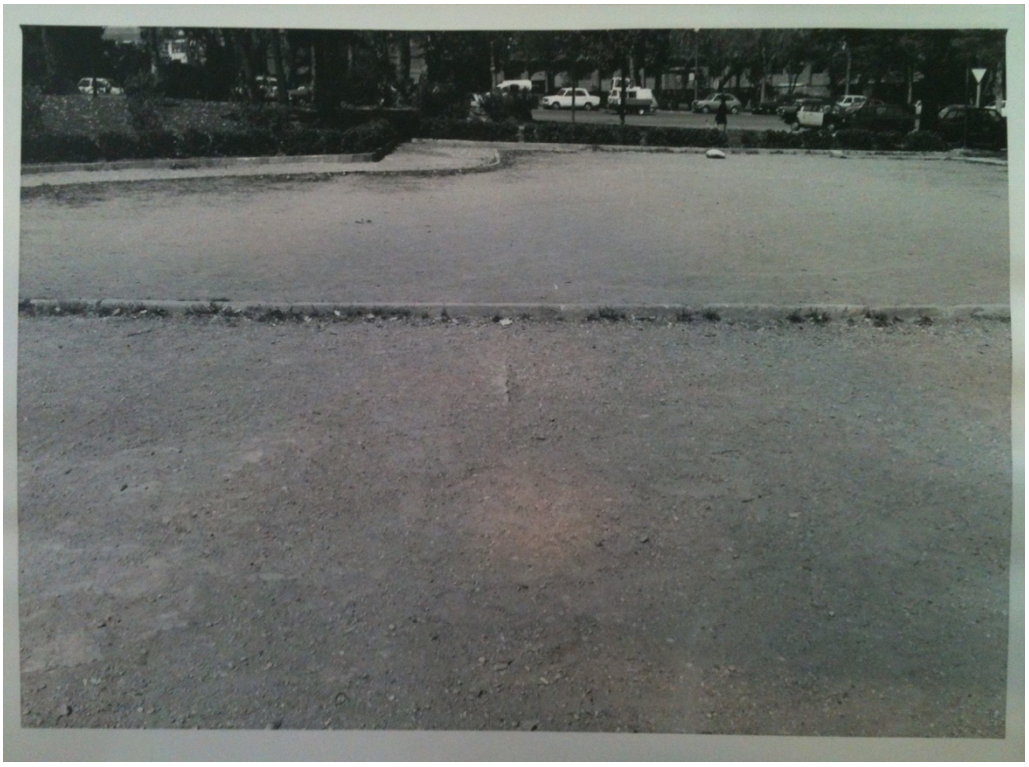
h.



i.



j.


k.


k.


l.


m.

Figure 8.2 (a-m): Ludwig Glaeser, photographic snapshots of the German Pavilion's empty site as encountered in 1979. Uncatalogued. Ludwig Glaeser archive, Museum of Modern Art, NY.

In all Glaeser's snapshots, the Pavilion is absent. In the pamphlet that accompanies Glaeser's exhibition his photographs of the Pavilion's empty site are not reproduced. Instead, as an example of the history of the Pavilion, it is present through its repeated and canonical Berliner Bild-Bericht prints. Glaeser's 1979 shots accentuate the emptiness of a site that is not only inaccessible but that due to its repeated appearance in the printed media it is, in our imaginary, ever present. We remember the Pavilion. We do not need to know it at first hand to affirm that we know of it. But we cannot imagine the Pavilion's absence or its remaining empty and dusty site after its dismantling. This is ironic, given that its absence has been substantially longer than its existence.

This chapter will address some of the stories that Ludwig Glaeser's photographs from 1979 hold. One of them is about our fixation with a 'timeless' building, and of a certain inability to understand the fragile nature of the architecture that once inhabited the site. Some of the Pavilion's late twentieth-century criticisms emphasise the transient nature of the building as a means to represent the fragile nature of its political construct (the Weimar Republic).[2] However, the grounds on which they do so are the canonical 1929 Berliner Bild-Bericht photographs, which in contrast are the most enduring documents that have perpetuated the Pavilion's ephemeral condition. Glaeser's snapshots respond to the ephemeral nature of a building that was dismantled, and that was built to be dismantled. These conditions of fragility and ephemerality alluded to by the snapshots will be examined in this chapter.

A second story that Glaeser's photographs hold concerns the stability of the Pavilion within architectural discourses and the permanence of the building within architectural history and criticism. This story is a product of the perpetuity of the 1929 photographs. These contradictory conditions of a photograph are more stable and enduring than the building they represent, and so they direct us

[2] And despite the Pavilion's reconstruction being there. See Josep Quetglas, *Fear of Glass* (Barcelona: Actar, Birkhauser, 2002), p. 168; Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-gardes and Architecture from Piranesi to the 1970s* (Cambridge, MA: MIT Press, 1987), p. 112.

towards a wider question about the tension between the building's absence and presence and its photographic depictions.

Lastly, and more importantly, Glaeser's photographs hold a story that has not been told yet: the story of the interruption of that established presence of the Pavilion, and of its unquestionable permanency. Glaeser's photographs are the evidence and materialisation of the Pavilion's disappearance: they picture the void of the absent building instead of the building. They portray an absent referent. However, these photographs are, at the same time, a document of desire to somehow see and rematerialised the building through the agency of photography.[3] In both cases, these photographs raise questions about the repetition of a series of photographic images that persist as if against the building itself.

In this way, Glaeser's snapshots open an in-between condition in the historiography of the Pavilion's photographic criticism as a stage after the building's dismantling in the 1930s and before its reconstruction in 1986. This in-between condition implies and asks for a disruption of the fixed and repeated constructs to which the Pavilion has been subjected. They interrupt the Pavilion's canonical stance and its system of references that has characterised and defined it.

This in-between condition of the Pavilion revealed by Glaeser's photographs is also evident through the presence of dust as the materiality of that absence. Dust takes possession of the Pavilion footprint, and dust replaces that referent. Dust activates the absence of the Pavilion, and therefore dust destabilises the history that the printed media created by perpetuating the Pavilion's presence through the repetition of its photo-reproductions. At the same time, they are also photographs of dust in the context of their archival condition. They exist in a box, unclassified, hidden and outside the canon, and literally covered by dust. 'Dust',

[3] See Ulrich Baer, *Spectral Evidence: The Photography of Trauma* (Cambridge, MA, and London: MIT Press, 2002).

therefore, acts here as a meta-concept, operating as the definition of the Pavilion's *terrain vague*[4] and acting as the indexical trace of the once existing Pavilion.

Dust also operates critically – though differently – in two other sets of photographs where the Pavilion is absent: the photographs of the construction site of the Pavilion in 1929, and the excavation photographs from the 1980s when the Pavilion's site was being explored to find material evidence relevant to the reconstruction project. However, dust does not perform in the same way in these two sets. Instead, these sets contribute to the discussion in other ways. In relation to the material fragility of the building, they suggest an alternative material reading of the building based on its constructive rather than its finished nature. And in relation to their failure as documentary evidence – as they have been generally addressed. If there is something that characterises them, it is their incompleteness.

8.1 Photographs of Dust

As mentioned above, Glaeser's 1979 photographs portray an absence of a building that instead existed in printed media and criticisms. One of the most interesting aspects is how this absence is reinforced by the presence of dust that inhabits the empty site of the Pavilion, as well as by the presence of the vegetation which surrounds that dust and which in Glaeser's photographs is all that remains of the 1929 project.

Since the earliest critical responses to the project, the relationship between the Pavilion and its surroundings has been problematic. This is largely because little is known about Mies's and Reich's thoughts on this matter. For some, such as the

[4] As David Campany, curator of the recent photographic exhibition *A Handful of Dust*, explains, in European literary and artistic imagination dust is often understood as a site of anxiety and fear: David Campany, *A Handful of Dust: From the Cosmic to the Domestic* (Paris: LE BAL, 2016).

architecture critic Wolfgang Pehnt, the 1929 Pavilion rejected its surroundings.[5] For others, such as Walther Genzmer, the selection of site was 'perhaps the most creative act of the architect [since] it is the given situation ... that essentially helped determine the whole for of the structure.'[6] More recently Caroline Constant redefined the Pavilion not only as a building but also as a picturesque landscape garden.[7]

When the reconstruction team visited the empty site of the Pavilion in the 1980s, they described it in terms of the vegetation that dominated the site. The description of the site as encountered by the reconstruction team could operate as a possible description of Glaeser's photographs, especially Figures 8.2j and k:

> This was a plot of land, roughly in the shape of a half moon, bounded by a rectilinear road which ran as far as the north façade of the Palau de Victòria Eugenia, and by a second curving, ascending road which ran from the main avenue to give access to the rear, and higher, part of the Victòria Eugenia. This plot compromises a relatively level space fronting the first of these roads, and a sloping area corresponding to the curving road to the rear. The vegetation we found on the site was basically the same as had been there at the time of the Exposition, with the enormous difference of the tremendous growth of the trees in the intervening years. The subsequent construction of a pavilion for the Instituto Nacional de Industria (INI) to the west, the removal of the colonnade and various changes to the landscaping and the fountains had all significantly altered the aspect of this part of the site.[8]

The reconstruction team were pointing to a definition of the site in terms of its remaining vegetation and of new and removed built artefacts that surround the Pavilion's site. But their definition does not address the void. They do not

[5] Wolfgang Pehnt, *'Architektur', Deutsche Kunst der 20er und 30er Jahre* (Munich: Erich Steingräber, 1979), p. 45, cited in Wolf Tegethoff, *Mies van der Rohe: The Villas and Country Houses*, trans. Russell M. Stockman, ed. Wiliam Dyckes (New York and Cambridge, MA: Museum of Modern Art and MIT Press, 1985), p. 85.
[6] Walther Genzmer, 'Der Deutsche Reichspavilion auf der Internationalen Ausstellung Barcelona', *Die Baugilde*, 11.20 (1929), cited in Tegethoff, *Mies van der Rohe*, p. 85.
[7] Caroline Constant, 'The Barcelona Pavilion as Landscape Garden: Modernity and the Picturesque', *AA Files*, 20 (Autumn 1990), pp. 46–54, reprinted in Caroline Constant, *Modern Architectural Landscape* (Minneapolis, University of Minnesota Press, 2012), pp. 45–60.
[8] Ignasi de solà Morales, Cristian Cirici and Fernando Ramos, *Mies van der Rohe: el Pabellón de Barcelona* (Barcelona: Gustavo Gili, 1993), p. 28.

describe the absence of the building, nor the presence of the dust that then stood for the building.

It is the presence of the void covered by dust that is not being addressed – that is, indeed, being avoided. Dust here is many things. Dust is what remains in the German Pavilion's site in Glaeser's photographs. Only dust. And though it sits, quietly, almost passively, this dust is also active in the way that it uncovers and makes visible the Pavilion's footprint. Yet dust in the form of a footprint becomes also a natural component of the surrounding landscape. Teresa Stopanni's revisiting of Bataille's entry for 'dust' (*Poussière*) in his 1995 *Critical Dictionary* is relevant here. In 'Dust revolutions: Dust, *informe*, architecture', Stopanni argues: 'Dust is form-less, it does not possess its own form, and it takes on that of its host, the nook in which it sits, the surface on which it is deposited.'[9] Dust, Stopanni continues, 'measures, increments and enhances set forms and surfaces while coating them; in covering and obliterating them it makes them more visible.'[10] Following Stopanni's (and Bataille's) understanding, in Glaeser's photographs, dust is that which stands for the covers and hides the Pavilion's remains; yet dust is also what stands for it; dust replaces the Pavilion. Dust is that which exposes the Pavilion's absence.[11]

However, here dust is not just that. In this specific case what Glaeser's photographs expose is how dust becomes a site-specific question in architecture, which means that dust might be more constitutive and honorific rather than solely base and 'informe.' Such is the case of 'dust' in the Acropolis,

[9] Teresa Stoppani, 'Dust revolutions: Dust, informe, architecture (notes for a reading of Dust in Bataille)', *Journal of Architecture*, 12.4 (2007), p. 437; doi: 10.1080/13602360701614714
[10]Bataille, 'Dust', in G. Bataille, M. Leiris, M. Griaule, R. Desnos et al., *Encyclopaedia Acephalica*, 'Critical Dictionary' (London: Atlas Press, 1995), pp. 35–36; On George Bataille's reading of Dust, see Stoppani, 'Dust revolutions'.
[11] According to Emma Cheatle who has worked on the agency of dust in the Maison de Verre, dust, as a remain, becomes an inevitable leftover. Emma Cheatle, *Part-Architecture, The Maison de Verre, Domesticity and Desire in 1930s Paris* (London and New York: Routledge, 2017). This is also partially addressed by Andrés Jaque in his intervention in the Pavilion in 2012 entitled *PHANTOM, Mies as a rendered society.* By bringing into display all the objects encountered in the reconstructed Pavilion's basement, most of which are either devices for cleaning or dusty objects – used cushions, pieces of broken glass – Jaque argues that they emerge as the phantoms of that which has not been seen and which we avoid seeing. Dust is one of them.

and also the dust that Michelet found in the Revolution Archives when imagined himself incorporating by breathing the remains of the revolutionaries; 'I breathed their dust.'[12] The 'dust' on the Pavilion site might be honorific in this way, if imagined to be continuous with the material of the Pavilion itself.[13]

Within architectural photography, dust has always been regarded as the incidental detail that is thought to be crucial. In the early years of photography, photographed dust was the positive outcome of a technology being developed, but it was also a possible way of understanding photography as that which grasps every small incident and grain of modern life.[14] It was thus 'an outstanding technology in which the lens captures what exceeds the eye',[15] as described by the curator and artist David Campany in the text accompanying *A Handful of Dust*, an exhibition that revolves around Marcel Duchamp's and Man Ray's photograph *Dust Breeding* (1920).

To consider dust in relation to architecture also opens-up the larger question of what architecture is and how it is represented. Seeing and photographing the Pavilion site's dust breaks the systems of reference that characterised and defined the architecture that once inhabited that site.[16] To 'see' dust, to address it, bring it back, and look at it in Glaeser's photographs exposes 'uncomfortable' issues for architectural history: the absence of the Pavilion precedes its presence; and the 1929 photographs can be timeless, but their portrayed

[12] Jules Michelet, *Ouvres complètes*, vol. 4 Referenced in Carolyn Steedman, *Dust* (Manchester: Manchester University Press, 2001), p. 27. Steedman also refers to 'breathing dust' as the symptom of the Real Archival Fever, or Archival Fever Proper, that lasts between sixteen and twenty-four hours and is the consequence of the exhaustion of archival work. Carolyn Steedman, 'Something She Called a Fever: Michelet, Derrida and Dust', *The American Historical Review*, 106.4 (2001), pp. 1159–80.
[13] According to Ricardo Daza who worked with Josep Quetglas in the book *Fear of Glass*, there were no efforts in making of the site of the Pavilion a hard landscaping made of spread gravel. What is assumed is that after dismantling, the site of the Pavilion, as all of the other Pavilions was mostly covered (probably the footpaths recovered), and left like that, without further interventions. The dust on Glaeser's photographs is therefore a mix of remains and gravel that covered remaining foundations.
[14] Sir John Robinson, 'Perfection of the Art, as stated in Notes on Daguerre's Photography', *The American Journal of Science and Arts*, 37.1 (1839), pp. 183–85.
[15] Campany, *A Handful of Dust*.
[16] Stoppani, 'Dust revolutions', p. 438.

building was not. As in Dennis Hollier's reading of Bataille, dust 'litters the representation of architecture and breaks it free (relieves it) from its network of references'.[17]

The layer of dust that covers the Pavilion's site is an expression of a material layered phenomenon. As a temporary building, the Pavilion was made to disappear. But if we think about the conflictual relationship between dust and architecture, dust also disappears. Dust is removed from architectural representations, polished away in architectural interiors, and is invisible within architectural discourse. It is clearly invisible in the Pavilion's case. The Berliner Bild-Bericht prints convey a distinct sense of transparency, displaying polished and reflective surfaces that all critics feel obliged to address, but surfaces on which it is inconceivable that they are covered with dust. This absence, or the unacceptable presence of dust in the Pavilion, has been brought to the fore through an installation in Andrés Jaque's *PHANTOM,* and through photography in Jeff Wall's *Morning Cleaning* (see Figure 8.3). Both works expose the cleaning tools and mechanisms put in place to efface dust. Modernity tried to efface dust, and it succeeded in doing so by portraying dreams of cleanliness, hygiene and total transparency both in interiors and in exteriors. Photography played a determinant role in this respect, and the Berliner Bild-Bericht prints are one of many examples.[18] If, for Bataille, 'seeing' dust 'activates it as an agent of change', in Glaeser's photographs dust acts as that which exposes an architecture and an ideological construct, while at the same time questioning its definition and its signification through its materialisation as a building which turned into dust to become a building again.

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[17] D. Hollier, *Against Architecture: The Writings of Georges Bataille* (Cambridge, MA, and London: MIT Press, 1989), p. 81.
[17] Steedman, *Dust*, p. 157.
[18] Within architectural discourse, scholars such as Teresa Stoppani and Emma Cheatle, and curators such as David Campany, have called our attention to dust and to its agency through readings of Bataille and Duchamp. Stoppani, 'Dust revolutions'; Cheatle, *Part-Architecture*. Also, David Hopkins '"The Domain of Rrose Sélavy": Dust Breeding and Aerial Photography', Mark Dorrian, Frédéric Pousin, *Seeing from Above: The Aerial View in Visual Culture* (London: I.B. Tauris, 2013) pp. 134–46. Dust has also been extensively investigated in relation to ruins, rubble and post-war environments.



Figure 8.3. Above: Jeff Wall, *Morning Cleaning*, Mies van der Rohe Foundation, Barcelona 1999. Below: Andrés Jaque, *PHANTOM: Mies as a Rendered Society*, intervention in the Barcelona Pavilion 2012.

Like the understanding of the photographic image as indexical, and dust as the active agent that exposes and unveils, for Walter Benjamin dust represented the index of the passage of time, which is also what the presence of dust is doing here. In *The Arcades Project*, Benjamin refers to dust in the section 'Boredom, Eternal Return': 'As dust, rain takes it revenge on the arcades. – Under Louis Philippe, dust settled even on the revolutions ... Push [upholstery] as dust collector. Mystery of dust motes playing in the sunlight. Dust and the "best room". Shortly after 1840, fully padded furniture appears in France ...'.[19] Dust is

[19] Walter Benjamin, *The Arcades Project*, ed. Howard Eiland and Kevin McLaughlin (Cambridge, MA, and London: Harvard University Press, 1999), p. 113.

part of Benjamin's project to find something unexpected, something that could potentially make a rupture in the margins of modern life, and something that, through being re-presented, may become the catalyst of critical thought.[20] Dust, for Benjamin, embodies this rupture. It allows past and present to be apprehended together, as in a dialectical image. If dust brings into architecture what is difficult to control, it also brings what is difficult to represent – the passing of time, which conventional architectural representations do not see.

If dust is, for Benjamin, what reveals and exposes, for Carolyn Steedman it is instead what covers and protects. In her book *Dust* (2001), Steedman writes about dust as history, as memory and as the archive. In a different material interpretation, and drawing upon Steedman, Glaeser's photographs of dust have also been covered by dust collected over time in the archive. The legibility of Glaeser's photographs are dependent on reading them in relation to an archive, and their gain status through their situatedness in relation to this. They are not housed within Mies's archive, nor are they part of mainstream research interests. Likewise, they have not been requested for consultation as they have also not been catalogued. They remain in an untitled box, and they are literally covered by dust.

As a material approach to architecture and its representations, I propose that one possible alternative to read Glaeser's photographs is as photographs of dust (photographed and covered by) that prompts a dynamic that, using the Pavilion as an example, aims to break architecture's defining frameworks and provides a means to disrupt its ideological and canonical constructs.[21] Glaeser's photographs of dust interrupt the reading of the 1929 canonical prints. They bring to the fore the Pavilion's absence as an in-between condition (echoing the idea of the 'optical unconscious', as discussed in Chapter Six). This condition makes visible the fragile nature of the Pavilion, in contrast to the persistent

[20] See Teresa Stopanni, 'Dust Projects: On Walter Benjamin's *Passagen-Werk* and some other contemporary dusty makings in architecture', *Journal of Architecture*, 12.5 (2007), pp. 543–57.
[21] Allowing for a material approach to permeate and inform the subject matter is, according to Hollier, a way of doing so. See Hollier, *Against Architecture*, p. 81.

image of the building as conveyed by the photographs. Dust as their indexical materiality (in photographs and on the site), and their materiality as encountered in the archive, define the grounds on which they are viewed critically and suggest how images do their 'work'.[22] It suggests that they need to be seen, encountered and dusted from the archive. Dusting them from their sole archival condition allows for re-ordering: new meanings can, therefore, come to supplant previous or canonical ones,[23] as well as to break the chain of signification.

Yet what I want to emphasise, is that while Glaeser's photographs are an interruption to the Berliner Bild-Bericht prints' iteration, they are also belated attempts to enact repetition. The repetition here is symptomatic, given the traumatic loss of the object of desire;[24] and maybe the object is not so much the building itself as the possibility of re-enacting the Berliner Bild-Bericht photographs.

8.2 The Pavilion is a temporary pavilion

Glaeser's photographs depict a temporariness – and therefore an absence – of an exhibition building once dismantled. The ephemerality of exhibition pavilions has been investigated by Pieter van Wesemael. In *Architecture of Instruction and Delight*, van Wesemael demonstrates how world exhibitions have been caricatured as collections of temporary buildings containing an exhibition of objects. This is an interpretation that, according to van Wesemael, leads to an incomplete and 'unjust' reading of the phenomena. He emphasises how pavilions, despite their ephemerality, have been part of a much more complex organisational network that involved years in the planning for a six- to eight-

[22] For further elaboration, see photography historian Matthew S. Witkovsky, as quoted in Claire Zimmerman, 'Reading the (Photographic) Evidence', *Journal of the Society of Architectural Historians*, 76.4 (2017), p. 448.
[23] See Leah Dickerman, 'The Fact and the Photograph', *October*, 118 (2006), pp.132–52, where she argues for the agency and possibilities of archival readings.
[24] Here trauma is understood psychoanalytically as a wound that cannot be symbolically integrated and is thus manifested by compulsive repetitions of symptomatic behaviour.

month exhibition of the best and most promising innovations of the participating and hosting countries (among other things). To set up an ambitious show is a significant enterprise that requires unimaginable labour, years, financial needs and a world-wide organisational structure. Van Wesemael comments on the inconceivable thought of them being destroyed with the same efficiency after only six or nine months. This discrepancy between, on the one hand, the extensive preparations, the commitment of thousands, and the enormous investments, and, on the other, the ephemeral nature of the event, is shocking and becomes physically evident in the dismantling of its pavilions. The German Pavilion by Lilly Reich and Mies van der Rohe is, in this context, merely one of many examples.

In the same way, it is possible to argue that both the Pavilion and the grain elevators share a certain ephemerality that has rarely been explored and that has been veiled by the permanence of their canonical photographic reproductions. In the case of the silos, their ephemerality was instead determined by the emergent capitalist economy that initially brought them into operation and later determined their demise.

Furthermore, as a 'modern' exhibition pavilion, the 1929 German Pavilion has played a distinctive role within modern architectural discourse. World exhibitions have been discussed as sites for the genesis of modern architecture and as examples of modern infrastructural projects or engineering aesthetics,[25] or of colonial and post-colonial confrontations.[26] Post-1900 international exhibitions were primarily geared to commerce, industrial manufacture and the display of commodities and were 'supplemented' by national shows. Also, post-1900, national pavilions became increasingly marked by the gradual disappearance of

[25] See Pieter van Wesemael, *Architecture of Instruction and Design: A Socio-historical Analysis of World Exhibitions as a Didactic Phenomenon (1798-1851-1970)* (Rotterdam: 010 Publishers, 2001); Kenneth Frampton, *Modern Architecture: A Critical History* (London: Thames and Hudson, 1985); and Alan Colquhoun, *Modern Architecture* (Oxford: Oxford University Press, 2002).
[26] See Tim Barringer and Tom Flynn (eds), *Colonialism and the Object: Empire, Material Culture and the Museum* (London: Routledge, 1998); and Burton Benedict, 'International Exhibitions and National identity', *Anthropology Today*, 7.3 (1991), pp. 5–9.

the consumer industries from the exhibition. The German Pavilion and other national pavilions from the same period played an important role in creating consciousness and national identity, both as individual presentations of governmental departments and as an opportunity to present the image of their country positively to the public; the German Pavilion inevitably played a significant role as a national pavilion that represented what we today understand as a fragile republic.



Figure 8.4. Postcards of various national pavilions at the 1929 Barcelona International Exhibition. Above: Yugoslavia. Centre: Belgium. Bottom: Italy. Source: Arxiu Fotogràfic de Barcelona, Ricardo Daza personal archive.

Other pavilions in the same 1929 exhibition provide similar examples of this intention, such as those of Hungary, Czechoslovakia and Yugoslavia (see Figure 8.4).[27] Despite their solid and permanent appearance as conveyed by their photographic images, Wesemael comments that the national pavilions, including the German Pavilion, drew upon fictional ideas of permanency. They provided the potential to enhance a country's international status by committing the population to

> the current political regime and to foster mutual compatibility amongst citizens by presenting a picture of their own society, based on (fictive) national characteristics – a collective identity – with (ideally) harmonious relationships between various sections of the population, each with its own role but nevertheless dependent on the others.[28]

[27] *Exposición Internacional de Barcelona, Diario Oficial*, Barcelona, August 1929. See also William Francklyn Paris, 'The Barcelona Exposition, a Splendid but Costly Effort of the Catalan People', *The Architectural Forum*, 51.4 (October 1929), pp. 481–93.
[28] Wesemael, *Architecture of Instruction and Design*, p. 22.

In this context it is relevant that the 1929 International Exhibition in Barcelona was the first time that the Weimar Republic had been given the possibility to present itself outside its own borders as a progressive young democracy with a clear international orientation.[29] The Weimar government's foremost symbolic purpose for its Barcelona exhibits and pavilion were to create a solid representation of Germany.[30] Although other sources may contradict this statement (even Mies's later interviews), it does explain the ambitious scope of the project as well as the choice of the architects.

8.3 Photographs of the 1929 German Pavilion's construction site

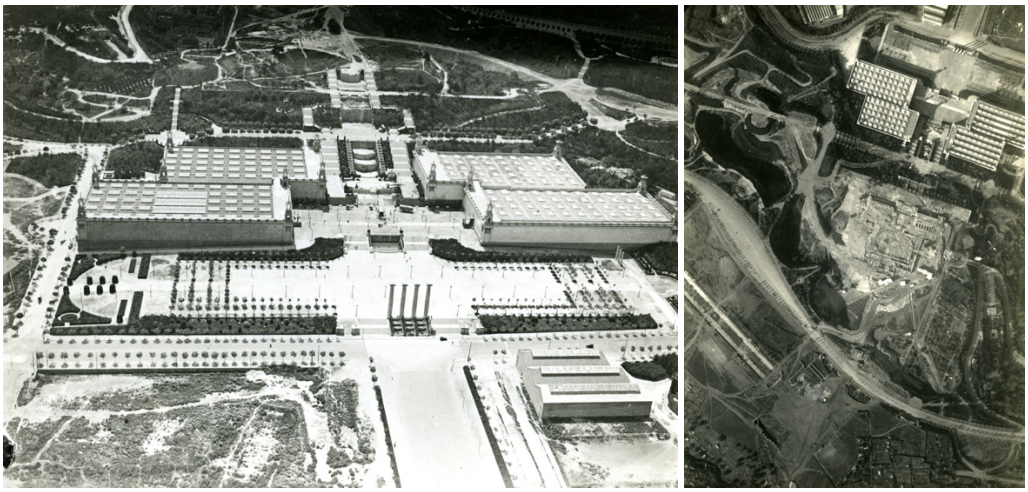


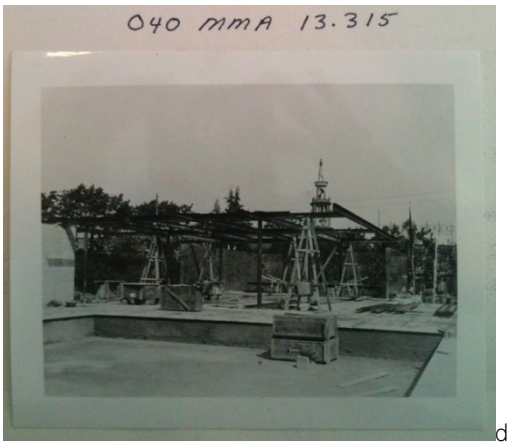
Figure 8.5. Site of the 1929 International Exhibition in Barcelona under construction, 1928. Photographer: Josep Gaspar Serra. Pavilion site on the right, Ref no. C_109_953 and aerial view of Montjuic, 01/01/1925. Pavilion site in the centre. Ref no. C_118_260, Arxiu Municipal de Barcelona.

[29] For a detailed narration of the origins of the pavilion, see Tegethoff, *Mies van der Rohe*. See also the official reconstruction document of the pavilion from the Ajuntament de Barcelona: *Estatutos de la Fundacion Publica del Pabellón Aleman 'Mies van der Rohe', Ajuntament de Barcelona, Octubre 1983*, Bauhaus Archiv, Berlin.
[30] As elucidated in one of the *Werkbund* executive meetings. See Tegethoff, *Mies van der Rohe*.


a.


042 MMA 13.314
b.


043 MMA 13.316
c.


040 MMA 13.315
d.


039 MMA 13.313
e.


038 MMA 13.319
f.


g.

h.


i.

j.

Figure 8.6. (a) Ref no MMA13.20. (b) Ref. 042 MMA13.314 (c) Ref. 043 MMA13.316 (d) Ref.040 MMA13.315 (e) Ref.039 MMA13.313 (f) Ref.038 MMA13.319 (g) Ref. MMA 13.323 (h) Ref. 035 MMA 13.310 (14.4.29) (i) Ref. 033 MMA 13.309 (29, III, 29). (j) Ref. MMA 13.312. Source: Mies van der Rohe Archive, MoMA, NY.



Figure 8.7. Ref No. 032 MMA 13.308, Mies van der Rohe Archive, MoMA, NY.

Information about the design and construction process of the Pavilion consists of only a few photographic shots, together with a series of incomplete drawings and scarce correspondence with suppliers, as found in the Mies Archive at MoMA. According to the Spanish reconstruction team, Ignasi de Solà-Morales, Cristian Cirici and Fernando Ramos, most of the reconstruction process was based on the information accessible from plans, descriptions, and estimated costs contained in the correspondence and other documents held in the Mies Archive.[31] However, the more widely disseminated speculations about the Pavilion's constructive nature developed around the few existing photographic snapshots, despite the limited information contained in them (see Figures 8.6 a-j and Figure 8.7).

This assumption derives from the understanding that, although photography typically shows how buildings look (or, more precisely, how we are supposed to see them), it is also through photography that one can trace and document the development of the displacement from drawing to building. Yet there is still little scholarship that addresses and reflects the unfinished state of buildings.[32] Buildings under construction have been a consistent subject matter of interest for photographers and architectural photography amateurs, and especially so at the beginning of the twentieth century when new construction techniques were of interest to practising architects. Erich Mendelsohn, Walter Gropius and Georg Muche were some of the many modern architects who travelled to America in the early 1920s to document American built forms. The construction site and, therefore, the construction process were mandatory subject matters (see Figure 8.8a).[33] Yet the construction site had been a matter of photographic interest even earlier, since late nineteenth-century engineers documented the construction processes tied to material developments, with the use of ferro-concrete as the

[31] Ignasi de Solà-Morales, Cristian Cirici, Fernando Ramos, *Mies van der Rohe Barcelona Pavilion* (Barcelona: Gustavo Gili, 2000), p. 15.
[32] Relevant to this discussion is André Tavares, 'Building Site', in Diogo Seixas-Lopes and André Tavares, *The Form of Form* (Zürich: Lars Müller, 2017); and Reto Geiser, *Ruins in Reverse*.
[33] See Gerda Breuer and Annemarie Jaeggi (eds), *Walter Gropius: Amerikareise 1928* (Berlin: Bauhaus Archive Berlin, 2008). For photographs of construction sites, see, for example, Erich Mendelsohn, *Amerika, Bilderbuch eines Architekten* (Berlin: Rudolf Mosse 1926).

most telling example.[34] Some of the most well-known examples are the photographs of the construction of Brasilia by Marcel Gautherot (1958-60) (see Figure 8.8b) and of Chandigarh by Pierre Jeanneret (1964),both of which provided an insight into the laborious construction process and, sometimes, the disconnect between the modernist claims of rationalisation and technological process, on the one hand, and the local nature of building processes on the other. This is also the case of Lucien Hervé's photographs of Le Corbusier's Villa Shodan in Ahmedabad (1951) or of the photographs documenting the building process of the Seagram Building, which was completed in 1958.



Figure 8.8. Left: (a.) Construction of the Bank of New York and Trust Co. Spread from Erich Mendelsohn, *Russland, Europa, Amerika: ein architektonischer Querschnitt* (Basel; Boston: Birkhäuser, 1989). Right: (b.) Brasilia under construction. Photographer: Marcel Gautherot. Source: Instituto Moreira Salles. https://ims.com.br/titular-colecao/marcel-gautherot/ (accessed 19 June 2018).

Construction sites have been a consistent and common photographic practice in twentieth-century photography. They were evidence of the modern ambition as places of production representing progress through material and technique. Yet, architects were usually not the ones taking the shots. Commissioning photographs was then established as a common practice for construction sites. Thus, photographers such as Hervé or Gautherot were commissioned, thereby

[34] See: *Beton und Eisen, Der Eisen Beton, Der Industriebau, der Neubau, Die Neue Rundschau* among others. In relation to nineteenth-century urban reconstructions, see Steven Jacobs, 'Amor Vacui: Photography and the image of the empty city', *History of Photography*, 30.2 (2006), pp. 107–18. On photographing the construction processes of concrete, see Adrian Forty, *Concrete and Culture: A Material History* (London: Reaktion, 2012).

pointing towards the aestheticisation of the photographs and the photographic product as an artwork (see Figure 8.8b). Mendelsohn, however, could be considered the exception to the rule (see Figure 8.8a), since he was not a professional photographer but an architect aware of the potential of architectural publication. Mendelsohn achieved this aestheticisation through the printed press.

The construction site was not one of Mies's or Reich's photographic subjects as it was for Mendelsohn. The sets of photographs of some of Mies's construction sites are usually the product of a third party. They resemble the common late nineteenth-century practice whereby the photographer was commissioned by the artisans, suppliers and commissioners rather than by the architect. This is also the case for the engineering journals, such as *Beton und Eisen* and *Der Eisen Beton*, that was addressed in Chapter Three. Mies did have control over the images of his buildings once they were finished, but not over the photographs of his buildings while they were under construction, at least not in Germany. It has been demonstrated that Mies visited his building sites, including that of the German Pavilion, but that he did not photograph, or even commission photography of, them.

Some of Mies's construction sites were, however, documented photographically. For instance, there are a few images from the construction of the Tugendhat house, originally shot by the owners of the house at the Bauhaus Archiv in Berlin (see Figure 8.9). And within the Myron Goldsmith[35] fonds at the CCA there are some photographs of the steel structure of the Farnsworth House under construction (see Figure 8.10). There are also photographs of Berlin's New National Gallery, widely recognised images because of the use of hydraulic cranes to lift the roof's structure (see Figure 8.11), and of the Lake Shore Drive apartments, commissioned by and housed at the Chicago Historical Society as evidence of urban development (see Figure 8.12). These photographs all portray

[35] Myron Goldsmith was an architect and structural engineer who worked with Mies on the IIT campus and Farnsworth House, among other projects.

steel structures, whereas only two of the photographs of the German Pavilion construction show such structures. Though each of the photographs above suggest a slightly different thing, what they share is how they portray steel as the material of choice and construction qualities of steel as the modern material (see Chapter Two), as well as the relevance of architecture as a process (see Chapter Three).


8.9.


8.10.


8.11


8.12

Figure 8.9. Tugendhat house under construction. Photography © Haus Tugendhat, documented by Dieter Reifarth. Figure 8.10. Farnsworth House. Source: Myron Goldsmith Fonds CCA.
Figure 8.11. New National Gallery © Archiv Neue Nationalgalerie. Source: Nationalgalerie, Staatliche Museen zu Berlin.
Figure 8.12. Lake Shore Drive, as photographed by Hedrich Blessing. Source: Chicago History Museum.

However, the mediatisation of modern architecture also influenced Mies's practice. Mies did commission photographers, such as Curt Rehbein, who took the early photographs of Friedrichstrasse and later the enlargements of Mies's collages. Rehbein also photographed the 1931 Deutsche Bauausstellung in Berlin. Once Mies had become an established architect, photographers such as Wilhelm Niemann from the Berliner Bild-Bericht agency, Sasha Stone and Paul Schulz made photographs of his work, many of which were printed and reprinted and distributed by photo-agencies initially in Germany and later, after his move to America, in the US too.[36] Later in the US, Hedrich Blessing was one of his preferred photographers. Mies commissioned Blessing to document the design and construction process of his Chicago buildings (see Figure 8.12).

This further illustrates, as Claire Zimmerman explains, that 'photography had a contradictory influence on Mies'[37] between the commercial (through the use of photo-agencies) and the avant-garde (through the use of avant-garde photographers). This dichotomy between photographs as documents and photographs as representations is present throughout Mies's work. In Germany, the consolidation of photographic agencies and architectural journals in the early twentieth century shifted, with very few exceptions, the general interest from the building as process – the construction site and its materials – to the building as a finished product. As a clear intention derived from Weimar Germany's understanding and use of media, and a consequence of the New Objectivity,[38] this trend of photographing and publishing single, finished buildings was rapidly consolidated.[39] Mies followed this lead, while at the same time continuing the production of photo-collages and montages. However, this move towards the finished object might also explain why the contemporary photographs of the

[36] Rolf Sachsse, 'Mies and the Photographers: Medium and Modernity as Enigma', in Helmut Reuter and Birgit Schulte (eds), *Mies and Modern Living: Interior, Furniture, Photography* (Ostfildern: Hatje Cantz, 2007), p. 257.
[37] Claire Zimmerman, *Photographic Architecture in the Twentieth Century* (Minneapolis: University of Minnesota Press, 2014), p. 54.
[38] For definition see page 96.
[39] Pepper Stetler (ed.), *Modern Architecture and the Book*, special issue of *The Journal of Architecture,* 20 (2015). See also Anne Hultzsch and Catalina Mejia Moreno (eds), 'Building Word Image: Printing Architecture 1800-1950', Special Collection *Architectural Histories*.

German Pavilion's construction site shot in 1928-29 only emerged once the reconstruction process had started, as well as why they have been of interest only after they were first published in 1985 and why they performed as documentary evidence for a reconstruction process rather than for ideological considerations.

8.3.1 The photographed construction site of the German Pavilion

As discussed in Chapter Five, the Mies van der Rohe Archive in MoMA in New York houses most of the printed material related to the German Pavilion in Barcelona. Most of this material is now published as a digitised catalogue known as the 'Garland books' (after its publisher), although it is actually entitled *The Mies van der Rohe Archive*.[40] However, much of the material remains unpublished. Some of the retouched and un-retouched 1929 Berliner Bild-Bericht prints, as well as some modern prints made from them, remain unpublished, as too do the photographs of the Pavilion's construction site.

The construction site photographs comprise a set of eleven photographs from 1928–29 (see Figures 8.6 a-j and Figure 8.7). This set has been primarily published as records of the construction methods and materials of the 1929 building, such as in Tegethoff's *Mies van der Rohe* (1985) and Solà-Morales, Cirici and Ramos's *Mies van der Rohe Barcelona Pavilion* (1993). Due to their particular viewpoints and depictions, it is possible to assume that this set of prints has no other apparent intention than to document certain instances of the construction process of the Pavilion, or even to document from a distance the construction site itself as evidence of an ongoing construction process. In two striking shots, both from a distance, the Pavilion's site can be foreseen (see Figures 8.7, 8.6i,j). In both, the site's surrounding vegetation appears foregrounded and to be a determining part of the site, while the eight Doric columns that would later act as

[40] *The Mies van der Rohe Archive*, ed. Franz Schulze (New York and London: Garland, 1992).

the building's stage-set frame the composition (see Figures 8.7, 8.6j) and the slope behind that would lead to the Spanish Village subtly makes its appearance. In these photographs, all of the site's main characteristics can be identified. But, mainly due to the significant presence of dust and to the absence of a building, Tegethoff argues that, overall, they seem to portray a sense of frustration and disappointment once faced with the difficulties of the project to be built.[41] Yet here, that frustration is not necessarily present. Moreover, Figure 8.7 could easily be mistaken for one of Glaeser's shots, despite the waving flag and the colonnade making an even more dramatic presence of an unforeseen absence.

Nevertheless, those photographs shot from a closer distance testify to the appropriation of a still empty site: the German flag appears waving where some months after a pavilion would be standing (see Figures 8.6 i, j, h, and Figure 8.7). The material nature of the unambitious and apparently simple foundations is beginning to be apparent; brick foundation walls can be seen coming out of the ground (see Figures 8.6 g, h, j). A third set of photographs depict the erection of some of the travertine walls, with some marble slabs piled next to them, and workers installing a steel structure that would afterwards become the building's famous 'floating walls' (see Figures 8.6e, f, c, a). Yet, due to the black-and-white nature of these photographic prints, the richness of the materials that enclosed Mies's and Reich's space are difficult to differentiate (or even to discern) on site. We now know that Mies and Reich envisioned Roman travertine for the defining walls; green marble (both Tinos and Alpine marble), onyx doré and clear, bottle green, mouse grey and milky white or sand-buffed glass to enclose the limits of the single space; and chromed steel columns and reflective water in the black-glazed pools. These materials were largely used, although they were substantially reduced due to various cuts to the budget.[42] One of the affected elements was the roof structure, which, according to Mies's collaborator Sergius

[41] Tegethoff, *Mies van der Rohe*. Tegethoff makes this suggestion when describing the budget cuts and adaptations that needed to be done to the project. Adrian Forty suggests that this same type of frustration was experienced by architects once prefabricated systems came into use: Forty, *Concrete and Culture*, p. 253.
[42] Solà-Morales et al., *Mies van der Rohe Barcelona Pavilion*, p. 14.

Ruegenberg, was composed of a sheathing of boards above and below the iron framework, sealed with tar paper to protect from the rain, and covered with a layer of plaster on the underside.[43] Along with these material changes, improvisation by the local builders was also evident at the back of the Pavilion where exterior walls made of brick were plastered and painted green, and in the podium, where catalan-vaults performed as a solid foundation system for its construction instead of a poured concrete slab as one would expect (see Figure 8.6h).

Not surprisingly, the agency of these photographs was to fill in the gaps left by the imprecise and incomplete set of drawings, none of which can be considered as construction drawings or documents. From the construction site photographs from 1928–29, the reconstruction team could identify the Pavilion's foundation system and the place where the pillars where anchored. But they could also clarify the role of the constructive nature of the two planes of the roof, based on steel frameworks and on the eight pillars that bear the roof of the Pavilion. Importantly, they also used the photographs as evidence of the use of local labour and its impact on the construction process of the building. From these photographs they could, for example, confirm that a grid structure supported the roof and that it had to be manufactured in Barcelona as a last-minute decision, as well as that the structure of the Pavilion's foundations was a series of catalan-vaults.[44] But that was it. Most of the information had to be interpreted from other sources. The conflicting nature of photography as a construction document is that it reveals as much as it hides. As architectural historian Michael Osman argues, all construction site photographs are 'far from an average descriptive document of a construction site',[45] and the photographs of the German Pavilion construction site are no exception.

[43] Tegethoff, *Mies van der Rohe*, p. 82.
[44] Solà-Morales et al., *Mies van der Rohe Barcelona Pavilion*, pp. 14–16.
[45] Michael Osman, 'The managerial aesthetics of concrete', *Perspecta*, 45 (2012), pp. 67–76, at pp. 72–73.

These few snapshots did not make use of the photographic medium as others did. For instance, Albert Kahn produced photographs of construction that focused on the design of construction processes and the processes of production; Kahn understood the photographic shots as an essential medium to remotely control the output over long distance (see Figure 8.13).[46] Even many of the late nineteenth-century engineering journals in Germany focused on using photography as a way of documenting the 'new' materials used for construction, such as in the case of ferro-concrete(see Figure 8.14).[47] Gilbreth's photographs focused on space and time to document the spatial arrangements of construction sites (see Figure 8.15).[48] And Walter Gropius made micro-motion photos of progress of the construction of the Bauhaus and its master houses in Dessau (see Figure 8.16).[49] All these photographs signified mass production, efficiency, functionalism, and progressive development. However, the photos of the German Pavilion construction do not connote these things. They are neither systematic nor detailed. Rather, they portray a construction site that seems, to some extent, basic, local (sometimes interpreted as 'precarious'), small, messy but also organised, and one that is misty and full of Mediterranean dust. It is hard to believe that they do not depict a building that was meant to rely on prefabrication. Instead, they depict a small building site in a historical and geographical context where the building's temporary nature is not evident, but where the site specificities are.

[46] Geiser, 'Ruins in Reverse'.
[47] Examples of engineering journals that concentrated on documenting construction processes of ferro-concrete exclusively are *Beton und Eisen*, *Der Industriebau*, and *Eisen und Eisenbeton*.
[48] Frank and Lillian Gilbreth, 'Instruction Card for Operation', Herman Auckman Company, 1912, cited in Ivan Rupnik, 'Exporting Space-Time: American Industrial Engineering Tools and European Modernism', in Eva Franch I Gilabert, Amanda Reeser Lawrence, Ana Milijački and Ashley Schafer (eds), *OfficeUS Agenda* (Baden: Lars Müller Publishers, 2014).
[49] Walter Gropius, 'Micro-motion studies of crane lowering beam and of opening "boswik" grill', Dessau, Germany 1926. Referenced in Rupnik, 'Exporting Space-Time'.

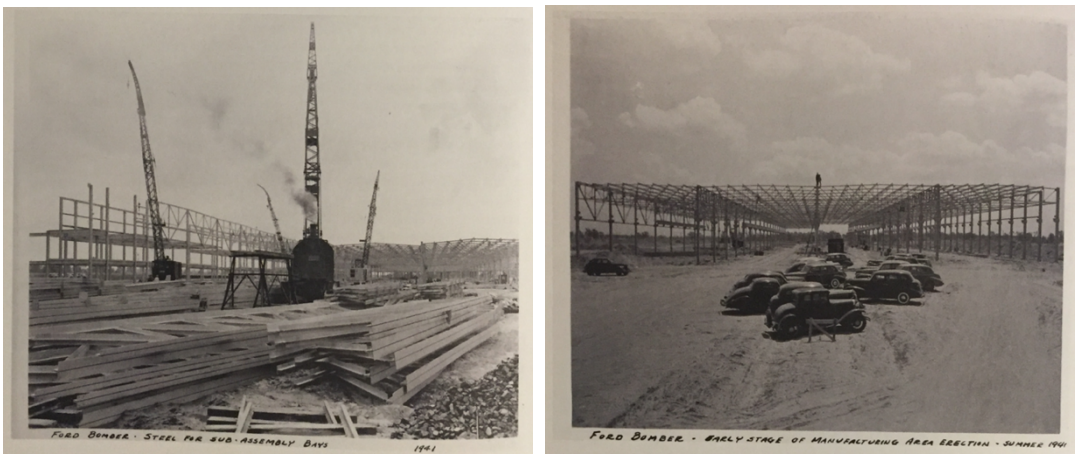


Figure 8.13. Willow Run Bomber plant under construction. Albert Kahn and Associates, Architects, 1941. Source: Albert Kahn Papers, Bentley Historical Library, University of Michigan. From Eva Franch I Gilabert, Amanda Reeser Lawrence, Ana Milijački and Ashley Schafer (eds), *OfficeUS Agenda* (Baden: Lars Müller Publishers, 2014). p. 124.

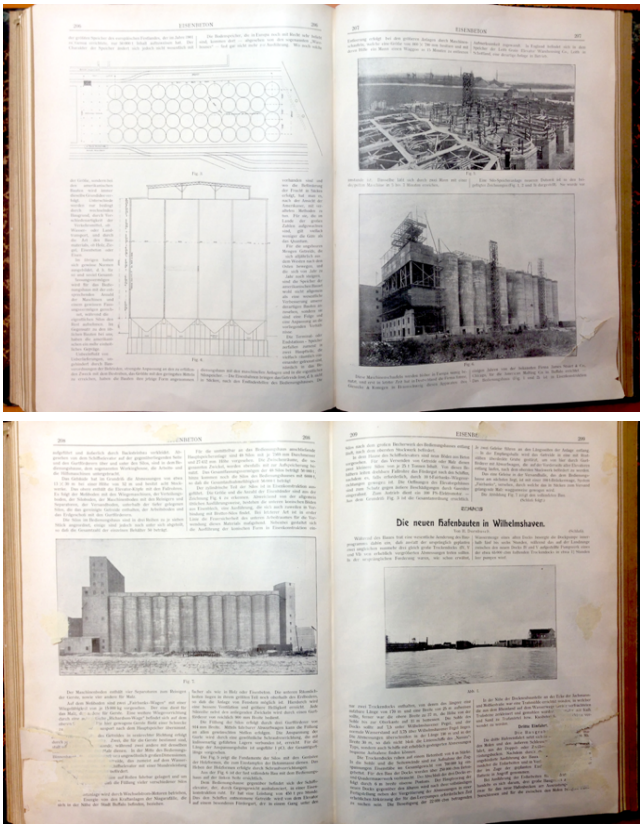


Figure 8.14. Silo. *Eisenbeton,Zeitschrift für Eisenbeton, Beton, Cementwaren and Kunstein Industrie.* Berlin, 23 August 1909. Nr 1, pp. 206–09.

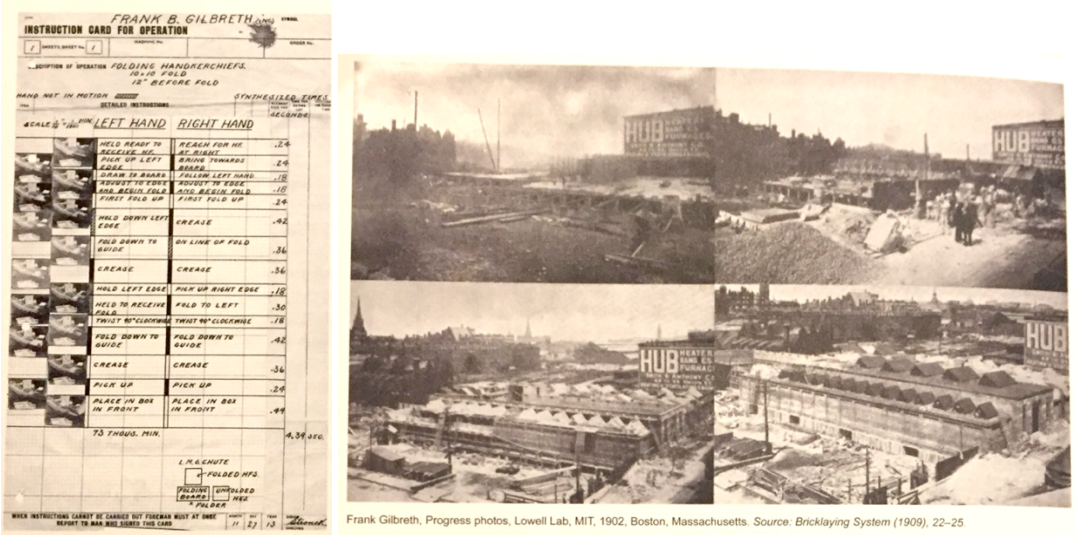


Figure 8.15. Frank and Lillian Gilbreth, 'Instruction Card for Operation' Herman Auckman Company, 1912. Source: Gilbreth Library of Management, Purdue University. Frank Gilbreth's progress photos. Lowell Lab, MIT, 1902. Source: *Bricklaying System* (1909), pp. 22–25. From Eva Franch I Gilabert, Amanda Reeser Lawrence, Ana Milijački and Ashley Schafer (eds), *OfficeUS Agenda* (Baden: Lars Müller Publishers, 2014), p. 110.

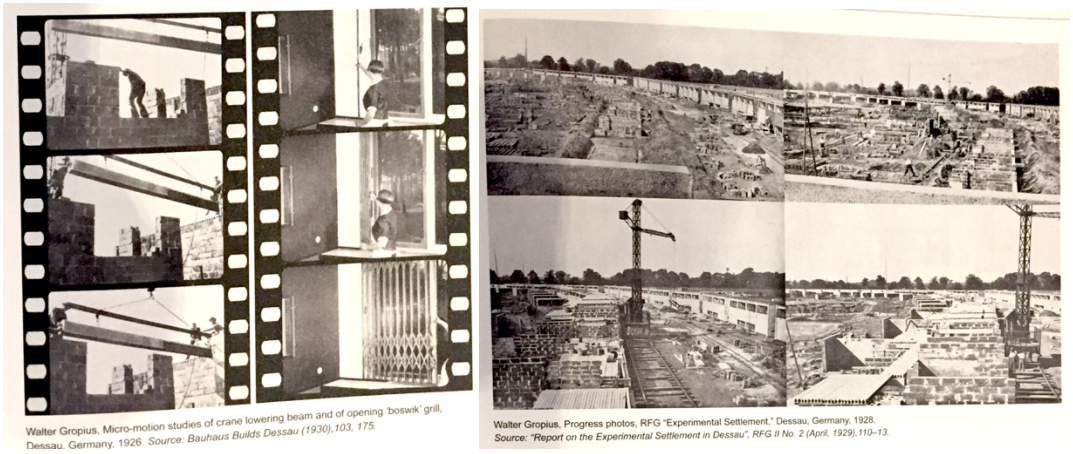


Figure 8.16. Walter Gropius, 'Micro-Motion studies of crane lowering beam and of opening "boswik" grill', Dessau, Germany, 1926. Source: *Bauhaus Builds Dessau* (1930), pp. 103, 175. Walter Gropius progress photos. RFG 'Experimental Settlement' Dessau, Germany, 1928. Source: 'Report on the experimental settlement in Dessau', *RFG*, 2.2 (April 1929), pp. 110–13. From Eva Franch I Gilabert, Amanda Reeser Lawrence, Ana Milijački and Ashley Schafer (eds), *OfficeUS Agenda* (Baden: Lars Müller Publishers, 2014), p. 111.

Yet as photographs of construction, some appear to suggest an archaeological excavation rather than a construction process (see Figure 8.6i-g). Furthermore, these photographs suggest that construction is unavoidably linked to destruction, and it is precisely that combination of destruction and construction that makes these pictures invigorating. Building sites display inherent similarities to ruins. In the case of the Pavilion's construction photographs, the site is delimited, but the only signs of a forthcoming building are piles of soil and dust, as if bringing to mind Robert Smithson's description of New Jersey, where a motorway was constructed as a

> zero panorama [that] seemed to contain ruins in reverse, that is, all the new construction that would eventually be built. This is the opposite of the romantic ruin because the buildings don't fall into ruin after they are built but rather rise into ruin before they are built.[50]

Yet what all construction sites share is the emptiness: 'the structures that are not yet, or no longer inhabited, or used.'[51]

The photographs of the construction of the German Pavilion in Barcelona do not speak of the iconic building that was portrayed in this same site in its early photo-reproductions. All the dust, fragility and ephemerality disappeared as soon as its construction was complete, and Mies and Reich commissioned the Berliner Bild-Bericht agency to document it, with very precise instructions on how to do it. Nevertheless, the construction photographs do speak of the dusty site that hosted the construction for eight months, and of a certain fragility entailed by the process of building. As with Glaeser's snapshots, the photographs of the construction site of the Pavilion open up an alternative and material reading of the Pavilion, and they also bring to the fore the fragility of the building's materiality. Yet Glaeser's photographs go further in their portrayal of a material in-between that exposes the fragility and ephemerality of a building that has always existed and repeatedly appeared through printed dissemination.

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[50] Robert Smithson, 'A Tour of the Monuments of Passaic, New Jersey (1967)', in *The Writings of Robert Smithson*, ed. Nancy Holt (New York: New York University Press, 1979), p. 54.
[51] Jacobs, 'Amor Vacui', pp. 107–12.

8.4 Dismantling and remains

The ceremonial opening of the Barcelona Exhibition took place on 19 May 1929. A week later, all the German sections, including the Pavilion, were opened to the public. In January 1930, only eight months after it had opened, the exhibition closed and the Pavilion began to be dismantled. The construction photographs show that, despite the Pavilion's refined and long-lasting materials along with the adapted technologies available in Barcelona in 1929 that made its construction possible, the German Pavilion was a temporary building. As a temporary building, its construction system had to be one that could be erected and dismantled rapidly, and so one that was ideally inexpensive and reusable. However, if kept, the combination of inadequate site work, inexpensively constructed roof and material finishes would have quickly eroded in the Mediterranean climate, marking the building's short life from its inception and another symptom of its fragility. Yet there seemed to be several attempts to find a buyer for the Pavilion and to install it somewhere else after its dismantling (or even converting it into a restaurant before dismantling); nevertheless, all attempts were in vain.

The endurance of the long-lasting materials was addressed, once more, during the excavation process that the Spanish team led as part of the reconstruction process of the building, along with a series of interviews that assisted the team in determining the fate of some of the Pavilion's remains.[52] As part of the research that led to the Pavilion's reconstruction, the Spanish team found that only a few of the construction materials were reused. This corroborates, on the one hand, the fragility of the Pavilion's materiality and, on the other, the unforeseeable place that the Pavilion would occupy within architectural history. For example, the company that supplied the marble took charge of its possible reuse in Germany. The chromed steel columns were also sent back to Berlin for possible

[52] This was the first publication that gave attention to the dismantling process; hitherto, all attention had been paid to the construction documents and design. See Solà-Morales et al., *Mies van der Rohe Barcelona Pavilion*. For a another detailed account see Derek Sayer, 'The Unbereable Lightness of Building – A Cautionary Tale', *Grey Room* No. 16 (2004), pp. 6-35.

reutilisation or resale. The steel structure was sold on-site after the Pavilion was dismantled. A small piece of onyx served as a table top in Sergius Ruegenberg's home in Berlin. In Mies's apartment in Chicago, the metal structure from one of his designed ottoman stools supported a slab of marble from the Pavilion to provide an occasional table.

Georges Kolbe's sculpture, *Dawn*, now stands in Ceciliengärten, Schönenberg in Berlin, the place where it was originally meant to be; it faces *Morning*, the other half of this sculptural pair. From all the Pavilion 'remains', this is the only one still possible to see, visit and experience materially and at first hand (see Figure 8.17). I searched for it; equating the reconstruction team's search for the Pavilion's remains. Searching, photographing, visiting and experiencing at first hand were products of a compulsive drive to experience some of the Pavilion's 'originality', scale and materiality. It fulfils the need to imagine how the only visible piece of the 1929 Pavilion could have inhabited the building. Above all, it involves seeing and photographing as proofs of the building's existence.



Figure 8.17. Series of photographs of *Dawn*, facing *Morning*, by Georg Kolbe in Ceciliengärten, Berlin. Photographs by author, 2014

In 1984 the reconstruction team made some photographs of the excavation process that led to the discovery of a few of the Pavilion's remains. These photographs are now housed in the Bauhaus Archiv in Berlin, also as sets of postcards. Two photographs from these sets drew my attention. The first portrays the unobtrusive foundations; the second shows the remains of a cruciform column. The subjects of both are covered by a garden planted with

palm trees; and they have remained covered by rubble and dust for more than fifty years (see Figures 8.18–8.19).[53] Above all, these photographs confront us with what is left of both the foundations and the column beneath the layer of dust and rubble captured by Glaeser in 1979. Again, the Pavilion is absent. Most of the space around these remains is empty. In an archaeological way of seeing, this emptiness is at the same time occupied by the imagination of the observer (in this case myself as the researcher), and, more specifically, by that of the reconstruction team in terms of what can be reconstructed from them. Adopting art historian Frederick N. Bohrer's description of the nature of archaeological photography, these excavation photographs 'invite our consideration of their past'.[54] It is not by chance that archaeology has been used as a metaphor in discussions on photography, and particularly photography that either looks for objects or that aims to document – or to make visible – an absence, such as Eugène Atget's photographs of Paris in the late nineteenth and early twentieth centuries, in which Atget saw 'the old and the new, as an archaeologist excavates strata of past civilizations'.[55]

In the same way in which Glaeser's photographs look out towards the palpable absence of a referent, these postcards scan for traces of the past. Yet one does this through excavation, the other through perception. Bohrer has described archaeological photographs as 'often photographs of deserted, and scanned with a forensic gaze, toward finding evidence of what took place previously';[56] This is clearly the case of the excavation photographs. Glaeser's photographs also echo, to some extent this description of the archaeological photograph, since such photographs are, by nature, photographs of absence. However, what remains to be asked is if they are directed towards 'finding evidence,' which in my opinion, they don't.

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[53] Solà-Morales et al., *Mies van der Rohe Barcelona Pavilion*; Tegethoff, *Mies van der Rohe*, p. 74.
[54] Frederick N Bohrer, *Photography and Archaeology* (London: Reaktion books, 2011), p. 11.
[55] Berenice Abbot 'Introduction', in *Twenty Photographs by Eugene Atget, 1856–1927*, quoted in Bohrer, *Photography and Archaeology*, p. 9. See also Herta Wolf, 'Archaeological Consciousness', in *The Photographic Paradigm*, ed. Annete W. Balkema and Henk Slager (Amsterdam: Lier en Boog, 1997).
[56] Bohrer, *Photography and Archaeology*, p. 9.

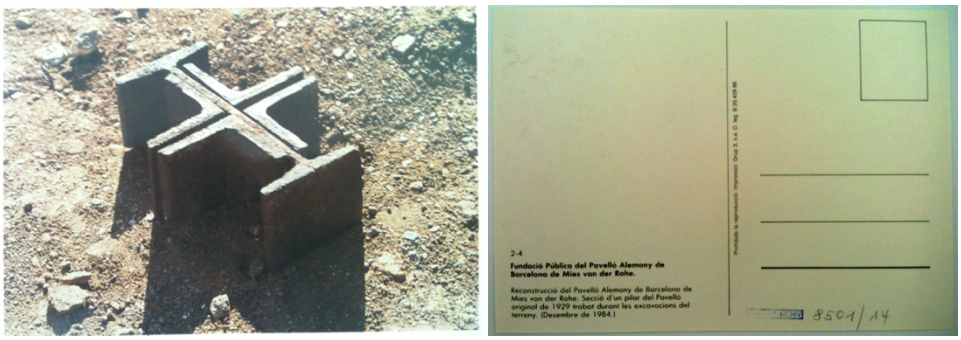


Figure 5.18. Postcard of a series of images collected as souvenirs of the process of reconstruction of the Pavilion in 1986. Section of 1929 column. Ref no. (8501/14) Bauhaus Archiv Berlin.

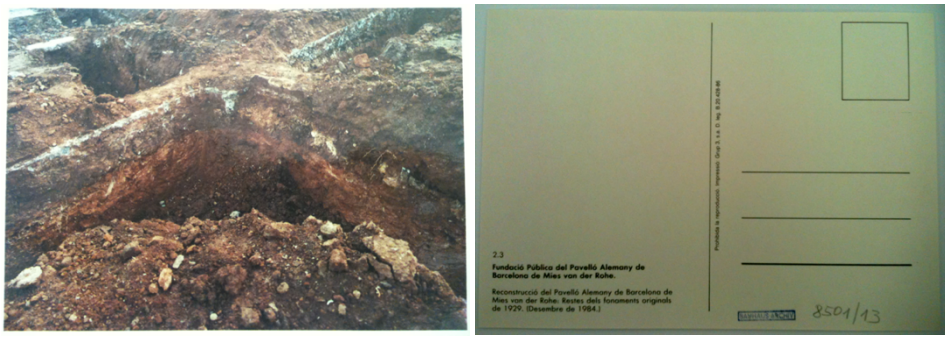


Figure 8.19. Postcard of a series of images collected as souvenirs of the process of reconstruction of the Pavilion in 1986. Remains of the 1929 Pavilion's foundations. Ref no. (8501/13) Bauhas Archiv Berlin.

While the excavation photographs portray traces of the lost Pavilion, Glaeser's photographs look for them. And they look not only for the traces of the Pavilion but also for what the canonical 1929 photographs depict – and even for the canonical photographs themselves. In both cases, absence is the characteristic feature, and it is only through imagination that this absence – or gap – can be reconstructed.

8.5 The German Pavilion's absence

Within architectural discourse and criticism, the German Pavilion in Barcelona has rarely been addressed as an absent referent, or as an empty site, or as a building with an immanent absence and fragility. The existence and endless publication of its 1929 Berliner Bild-Bericht prints have always presented the

Pavilion as if it exists and is ever present. Yet over most of the last ninety years the Pavilion has not been physically accessible until its reconstruction. However, this apparent dichotomy between presence and absence as manifested through the building's history and photographs is also a defining characteristic of photography itself. Walter Benjamin, Roland Barthes and, more recently, Eduardo Cadava have suggested that this dichotomy is naturally rooted in all photographs. They argue that all photographs that capture an imminent disappearance, an absence; photographs preserve that which is going to disappear.[57]

For the Pavilion, photography has potentialised this dichotomy. The presence and repetition of the Berliner Bild-Bericht prints in the printed media have guaranteed a perpetual presence to an absent building in the same way that the presence and absence of the silos in printed media have extended the lives of the silos in different ways (see Chapter Two). As Juan Pablo Bonta has noted, the iconicity of the Pavilion was fabricated and consolidated during the physical absence of the building through and because of its photographic representations, and, therefore, to the lack of accounts of first-hand experiences.[58] Only a very few of the Pavilion's interpretations are those of writers who did see and experience the building at first hand; among them is the French journalist Nicolau Ma. Rubio I Tuduri, whose description of the building in *Cahiers d'Art* has become a mandatory reference.[59]

Absence as a condition of the Pavilion has been addressed only a few times by comparison with attention to absence as the Pavilion's signifier. It was in the 1980s when this tension between the imperishable (or the permanent) and the

[57] See Eduardo Cadava, 'Mortification', in Cadava, *Words of Light: Theses on the Photography of History* (Princeton: Princeton University Press, 1997), p. 8; Roland Barthes, *Camera Lucida* (New York: Hill and Wang: 1981); Walter Benjamin, *Illuminations*, ed. Hannah Arendt (New York: Schocken Books, 1968), p. 226. See also Geoffrey Batchen, *Photography Degree Zero: Reflections on Roland Barthes' Camera Lucida* (Cambridge, MA, and London: MIT Press, 2009).
[58] Juan Pablo Bonta, *Architecture and its Interpretation: A Study of Expressive Systems in Architecture* (London: Lund Humphries, 1979).
[59] N.M.Rubio Tuduri, 'Le Pavillion d'Allemagne à l'Exposition de Barcelona par Mies van der Rohe', *Cahiers d'Art*, 4 (1929), pp. 408–11.

ephemeral was addressed by the Italian architectural historian and critic Roberto Segre. He did so as a means to interpret the German Pavilion's dismantling and its relationship with the fall of the Weimar Republic. Most of the building's recognised critics who never got to see the Pavilion address Mies's simplicity of forms, the perfection of his details, the flow of the interior space, the outstanding play of interior reflections, and the dematerialisation of the modular metallic structure achieved by using a coating of stainless steel; Segre, however, is more interested in the relationship between the Pavilion's absence and its ideological meaning that is rooted in the context of the spring of 1929 in Germany:

> [the Pavilion's] functional uselessness, its 'expressive' silence, its lack of human content, its imperishable material (the utter antithesis of the ephemeral nature of a temporary exhibition pavilion) have been identified more with the persistent, foreboding symbols of Prussian militarism – the breeding ground from which Hitler's hordes would emerge immediately after the world lurched into depression in 1929 – than with attempts by progressive cultural and political forces to save the 'fragile' Weimar Republic.[60]

A delicate dichotomy present in the German Pavilion is pointed out by Segre when he highlights the Pavilion's imperishable materials as symbols of Prussian militarism, and its ephemeral nature as symbolic of the 'fragile' Weimar Republic.

Segre's argument makes the 'absence' of the Pavilion a significant and natural part of its material and political meaning. This argument is revisited by the later interpretations of the Pavilion by Manfredo Tafuri and Josep Quetglas, and informed by negative dialectics and semiotics. Constitutive of the Venice School's tradition of negative thought, Tafuri described the German Pavilion as the 'place of absence'. Initially, he defined it as 'pure negative dialectic'; while the pure forms reveal a spatial continuum, the transparencies become 'impassable diaphragms'.[61] Years later, in *The Sphere and the Labyrinth*, Tafuri elaborated

[60] Roberto Segre referenced in Josep Quetglas, 'Fear of Glass: The Barcelona Pavilion', in *Architectureproduction* (New York: Princeton Architectural Press, 1988), p. 150
[61] Manfredo Tafuri and Francesco Dal Co, *Modern Architecture*, trans. Robert Erich Wolf (London: Academy Editions, 1976), p. 155.

further on the same ideas. Here, the role of 'absence' is determining: it is the signified. Tafuri argues:

> In ... the Barcelona Pavilion, Mies van der Rohe constructed a scenic space whose neutrality shares profound similarities with that of the rhythmical geometries of the sets of Appia and Craig ... In a place that refuses to present itself as space and that it is destined to vanish like a circus tent, Mies gives to a language composed of empty and isolated signifiers, in which things are portrayed as mute event. The sorcery of the theatre of the avant-garde dies out in the wandering without exits of the spectator of Mies' Pavilion ... In the absolute silence, the audience at the Barcelona Pavilion can thus "reintegrate" with that *absence.*[62]

It is interesting to note that this interpretation of the Pavilion as a place of the exposition of 'nothing', according to Tafuri, is mostly derived from Tuduri's first-hand experience of the Pavilion in 1929.[63] Yet Tafuri draws upon and revisits Tuduri's line of thought through a reading of the reflective surfaces and drawing plans of the Pavilion as depicted in a series of incomplete drawings and in the Berliner Bild-Bericht retouched photographs, whose reflectivity, as emphasised in Chapter Two, is the result of the manual retouching processes.

Spanish architectural historian Josep Quetglas drew upon Tafuri's interpretation of the German Pavilion to read the building not as a 'place of absence', but instead as the representation of the 'void'.[64] Yet for Quetglas, the 'void' as the absence of form can only be represented metaphorically.[65] Rather, the meaning of the Pavilion is materialised when the signified coincides with the signifier: when the representation of the 'void' can coincide with the 'void' – thus, the act of dismantling of the building. Quetglas describes this point of encounter:

> They take down the scenery, the panels of stone, the carpets; they leave the place, previously occupied by the representation of the void, empty. *Oh how we must disappear, so that you will take notice of him*! The void left by the presence of the pavilion became, after 1930, the architecture of Mies. A void that, in

[62] Quoted in Josep Quetglas, *Fear of Glass* (Basel: Birkäuser, 2001), p. 390.
[63] Tuduri, 'Le Pavillion d'Allemagne', pp. 408–11.
[64] Josep Quetglas, 'Fear of Glass', p. 150
[65] Intriguingly, since he is a Spanish architectural historian based mostly in Barcelona, Quetglas never refers to the Pavilion's empty site, even though he has probably visited it more than once.

> order to be a sign – that is to say, in order to be noticed as significant – needed precisely to have been represented previously as such a void, so that in the disappearance of its representation it would present itself.[66]

For Segre, Tafuri and Quetglas, the 'absence' is presented by the building and by its disappearing Republic. It is embedded in the building's ideological meaning and manifested as the building's signifier. It is also strengthened once the building has been dismantled, along with all the conditions that the building embodies. Yet all these readings are based on the idea of a building as seen through its 1929 photographic representations; absence here becomes a meta-narrative, not a material condition (which is what Glaeser's snapshots bring to the fore so strongly). Quetglas subtly refers to the moment when the building is no longer there, and he uses some of the non-canonical photographs to describe the experience of the void that the building reveals (see Figure 8.20). However, there is a disjunction between Quetglas's verbal reconstruction of the experience of the Pavilion's visitor and the photographs that he includes in his writing, as if he refuses to draw on the canonical ones while at the same time is unable to construct his interpretation without them.

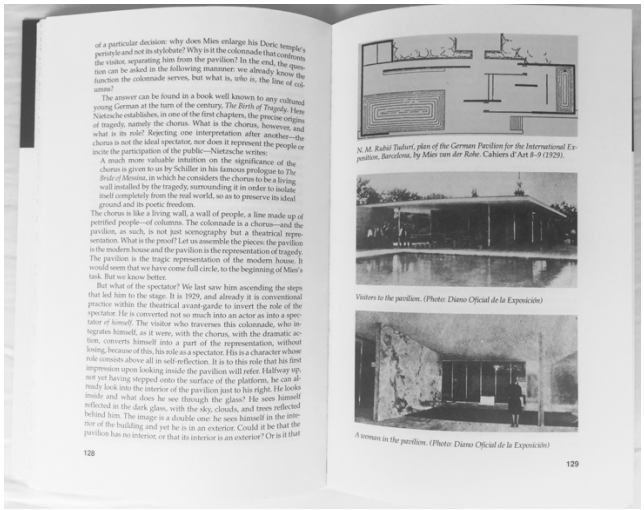


Figure 8.20. Double spread from Josep Quetglas, 'Fear of Glass: The Barcelona Pavilion', in *Architectureproduction* (New York: Princeton Architectural Press, 1988). p. 129.

[66] Quetglas, 'Fear of Glass', p. 151.

The presence of the building through its 1929 Berliner Bild-Bericht prints has once again determined these criticisms, thus demonstrating how conditioned architectural history and discourse are to these repeated canonical prints. And despite 'absence' being crucial, it is evident that it derives from the ever-present photographic reproductions, but also that as a signified it is impossible to represent. The material absence of the building, which is something Glaeser captures, is something that escapes the critiques of Segres, Tafuri and Quetglas.

The first time that the dichotomy between the absence and the presence was addressed materially was through the installation by the artist Antoni Muntadas in 2009. Muntadas introduced the olfactory presence of the archive in the reconstructed Pavilion, reproducing for the audience through smell the documents kept in Mies van der Rohe's archive in MoMA, New York. Muntadas aimed to expose that

> the pavilion – its physical construction – existed when it was built in the late twenties and after 1986, when it was reconstructed. The project – the conceptual and documentary project – exists on paper during the intermediate period of this continuity. The 'dissolved' project, materialized on paper – drawings, photographs and texts – existed for over forty years, during which it was the only representation of the Pavilion.[67]

By calling attention to the absence of the Pavilion's built physicality (and, therefore, to the existence of the remaining Pavilion's paper-based condition), this subtle intervention highlights issues of the temporariness and permanence of the building. But, by doing so, Muntadas raises awareness of the absence of a physical building in contrast to the presence of its paper continuation, as well as of the intricate tension between the Pavilion's presence and absence. Nevertheless, he does this in the 1986 reconstructed building. The absence that Muntadas is referring to becomes imaginary; as the reconstruction will be by definition non-identical to the original building, the faithful reconstruction also marks an absence – even while it tries to fill it in.

[67] Antoni Muntadas, 'The Pavilion and its archive', in Muntadas, *On Translation: Paper BP/MVDR. Mies Files 01* (Barcelona: Actar, 2009), p. 19.

8.6 Empty site photographs

As mentioned previously, it is the overlooked absence of the Pavilion and its neglected ephemeral nature that are brought back by Glaeser through his 1979 photographs of the Pavilion's empty site – brought back visually, that is, not metaphorically as in the cases of Quetglas or Tafuri. In Glaeser's photographs, the emptiness is both presented and represented, and the absence is manifested by the depiction of an absent building. This emptiness differs from the emptiness that preceded the building (as in the case of the construction site photographs) or the emptiness that exposes the building through its remains (as in the case of the excavation photographs), where the emptiness awaits a building to replace it. Glaeser's photographs are mourning a lost referent – they are searching for it. Yet what Glaeser's photographs seem to mourn is the ability to re-enact the Berliner Bild-Bericht photographs precisely because of that missing object; what Glaeser's photographs are searching for, this chapter suggests, is the Berliner Bild-Bericht photographs more than the missing material building.

Photographs of empty sites are most commonly found in discourses of trauma and mourning.[68] Ulrich Baer and George Didi-Huberman address absence and emptiness in their work on the photographs of the empty sites of Auschwitz and the former concentration camps in Germany and Poland. For both, photographs are understood as 'stand*points*: as places to think about occurrences that may fail, violently, to be fully experienced, and so intergraded into larger patterns',[69] as well as being triggers of ways of seeing that can be testimonial and, therefore, mournful. Yet they are distinct as photographs that embed trauma and work through trauma. Though Glaeser's photographs are arguable not comparable as they are closer to photographs of mourning rather than of trauma, they can also be photographs of trauma in much as they represent what psychoanalytically

[68] Georges Didi-Huberman, *Images in Spite of All: Four Photographs from Auschwitz* (Chicago and London: University of Chicago Press, 2008); Ulrich Baer, *Spectral Evidence: The Photography of Trauma* (Cambridge, MA, and London: MIT Press, 2005).
[69] Baer, *Spectral Evidence*, p. 1.

speaking is a wound that cannot be symbolically integrated and is compulsively manifested by compulsive repetitions of a symptomatic behaviour.



Figure 8.21. Sophie Ristelhueber, 'Because of Dust Breeding' (2007). Source: http://galeriepoggi.com/en/artistes/oeuvres/3361/sophie-ristelhueber (accessed 7 September 2018).

The fragility implied by the absent bodies exposed in Baer's and Huberman's work has also been explored in artists' photographs, such as Sophie Ristelhueber's; specifically the one she names 'Because of Dust Breeding' (1991–2007) after Man Ray's Dust Breeding (1920) which portrays and aerial view from the Kuwait desert as a wounded land, full of marks and traces of war (see Figure 8.21). Dust here is also, in Rosalind Krauss words, 'a physical index for the passage of time.'[70] Further, Ristelhueber's photograph is a portrait of absence that presents itself as a summative statement strategy between Ristelhueber and Ray in which dust plays a determinant role. There is a long duration of accumulation of dust, six months in the case of Man Ray's photograph. There is also the long duration that the work depicts: 'the slow violence of dust as it moves across numerous scales. Dust is a by-product of the human body, compounded of skin flakes, hairs and secretions, pulverised and airborne. Mountaines erode into dust over aeons, and cities attacked from above are

[70] Rosalind Krauss, 'Notes on the Index: Seventies Art in America,' *October* 3 (Spring 1977) p. 75.

ground to dust within a matter of hours. Dust accumulates and is swept away, just like the marks of tank tracks, bomb craters ...'[71]; a palimpsest of traces that reminds of Glaeser's photographs, and of the agency of dust in them. As 'Because of Dust Breeding' is an afterimage of war, Glaeser's photographs are an afterimage of the Pavilion; mostly afterimages of the Berliner Bild-Bericht prints.

Yet together with Ristelhueber's, there is another set of photographs by Victor Burgin for his project *Voyage to Italy* (2007) and that seem close to Glaeser's. Through video and two photographic portfolios, Burgin responds to a single photograph made in 1864 by Carlo Fratacci of the basilica at Pompeii, in which the camera stares at the ruined structures and at the woman who stands in the way (see image 8.22).

[71] Henrik Gustafsson, 'The Cut and the Continuum: Sophie Ristelhueber's Anatomical Atlas' *History of Photography*, 40.1 (2016), p. 85. See also David Hopkins, '"The Domain of Rrose Sélavy": Dust Breeding and Aerial Photography', in Mark Dorrian and Frédéric Poussin, *Seeing From Above: The Aerial View in Visual Culture* (London: I.B. Tauris, 2013), p. 145







Figure 8.22. Above. Carlo Fratacci, active Naples ca.1860. *Basilica*, 1864. Unnumbered plate from an album entitled *Principales Vues de Pompeii par Charles Fratacci* (Naples, 1864), comprising 26 photographs by Fratacci. Ref No. PH1983:0504:007. CCA. Below: Victor Burgin, *Basilica I*. 2006. One of 24 black-and-white photographs in superposed horizontal rows of twelve. Ref No. PH2006_0207. Victor Burgin, *Basilica II*, 2006. One of seventeen black-and-white photographs in superposed horizontal rows of nine and eight. Ref No. PH2006_0215. CCA.

After coming across *Basilica* by Carlo Fratacci at the Canadian Centre for Architecture archive, Burgin returned to Pompeii, to the original site of Fratacci's photograph, to search through photographs and a video for the 'midday ghost' of the woman.[72] Burgin's response in *Basilica I* addresses the relationship of the woman with the space in which she is photographed, while his response in *Basilica II* concerns the relationship of the woman – or the ghost – with the photographer.

It is striking that Burgin follows a very similar process to that of Glaeser. Both are fascinated by the presence of a referent in a photograph. In Burgin's case, the referent is both human and architectural. Neither of them has the chance to encounter the referents personally and at first hand. Both encountered their subjects in archives. But both return to the sites where the original photographs were shot, and through photography try to find them. This is the impression of the site, as encountered in Burgin's words:

> It is commonplace to note the uncanny effect of photographs that show the apparently living presence of someone long dead ... The entire architectural site of Pompeii is an impression of this kind. Like a photographic plate, the surface of the city has received the imprint of an event that has irreversibly transformed it. In a neologism, Pompeii is a catastrophic image ..., any photograph of Pompeii is therefore the impression of an impression, the index of an index.[73]

This search for the lost referent (though usually triggered by the presence of a woman) is part of Burgin's wider project and is also visible in 'Mies in Maurelia'.[74] In this project, Burgin revisited the 1986 Pavilion in search of 'that which really exists' (in a similar way to my own visit to Kolbe's *Dawn*).[75] In encountering the Pavilion, Burgin fails to encounter the woman he looks for: a woman he had encountered in the Barcelona City Museum in a film still of the Catalonian Civil War. She holds a rifle, is smiling and raises her hand to shade her face from the

[72] Victor Burgin, 'The Shadow and the Ruin', in *Voyage to Italy* (Ostfildern: Hatje Cantz, 2007), p. 79.
[73] Burgin, 'The Shadow and the Ruin', p. 79.
[74] Victor Burgin, 'Mies in Maurelia', in Burgin, *The Remembered Film* (London: Reaktion Books, 2006), pp. 74–88.
[75] Burgin, 'Mies in Maurelia', p. 84.

sun. In other words, Burgin fails to encounter through this woman the reality that *Dawn* symbolises. For Burgin, the 1986 Pavilion embodies an absence: the absence of the 1929 building. Therefore, Burgin argues, the 1986 reconstruction can only be the 1929 Pavilion's ruin, memorial or mausoleum: that which the modern history of progress brought to an end in 1930. The 1929 Pavilion will always remain absent.

In Burgin's work, 'presence' (in contrast to 'absence') represents 'the return to the patriarchal principles by means of reaffirmation of the primary presence'.[76] This, in Derrida's understanding, is an 'origin' and could be an 'author' of a 'reality' or a 'history'. Informed by postmodernism and drawing upon conceptual art, Burgin presents absence as a means of avoiding the eradication of accounts of difference, as well as of avoiding the eradication of division of the private and the social, of form and content, of the masculine and the feminine (thus of 'men' and 'women'), of theory and practice, and so on. The absence of 'presence' prompts, for Burgin, recognition, intervention, reorganisation – and thus the 'possibility of change'.[77] This is what Glaeser's photographs also prompt, and it is what the presence of dust exposes: a change in the discourse, an intervention and a disruption of the Pavilion's photographic canon.

Further, the presence of the woman as a 'ghost' or as the failed encounter, act here as reminders of the photograph as a 'spectral' technology as well as to the history of 'spirit photographs' as if one might discover something – a 'ghost' within the photograph that eludes the naked eye,[78] what Roland Barthes in *Camera Lucida* writes as the literal emanation of the referent.[79] 'Though it is no longer there (present – living),' writes Derrida in his mourning work on Barthes, 'its having-been-there presently a part of the referential or intentional structure

[76] Victor Burgin, *The End of Art Theory: Criticism and Postmodernity* (London: Macmillan, 1986), p. 48.
[77] Burgin, *The End of Art Theory*, p. 49.
[78] Benjamin reminds us as the possibility of the photographic image requires that there be such things as ghosts and phantoms in *Tauerspiel* ('The Origin of German Tragic Drama', 1928). See also: 'Ghosts' in Eduardo Cadava, *Words of Light*.
[79] Barthes, *Camera Lucida*, pp. 80–82.

of the photogram, the return of the referent takes the form of haunting.'[80] The presence of the woman is a 'return of the dead;' the referent that 'in its very image, I can no longer suspend, even though its 'presence' forever escapes me, having already receded into the past.'[81] Yet it is also the woman who reminds us of the blurred woman in Chapter Seven, whose spectrality acted to undermine the monumental stasis of the large -scale Berliner Bild-Bericht images, as well as the one who prompts again a reading of the optical unconscious addressed before, where details take their own significance. The spectral figures of the women disrupt the linear time, establishing a link between past and present as a repetition, but in this case a repetition with a difference. As Nick Peim suggests: 'the spectre is revenant, a past figure keeps coming back, disrupting the smooth logic of time.'[82]

These spectrality of the woman is also manifested in the spectral quality of Glaeser's photographs. The 1929 Pavilion has been absent in the photographs of its construction site, as well as in the photographs of its excavation in the late 1980s. The Pavilion has been absent because, as emphasised in this chapter, it was meant to be absent. It was conceived, designed and constructed as a temporary pavilion. This is something that Wesamael's work has emphasised in addressing the wider history of exhibition pavilions; it is also something that has remained overlooked in the history of Mies's and Reich's exhibition design history. The construction site photographs and the excavation photographs subtly depict the fragility of a temporary building; their archaeological nature attests to this. All these examples share a sense of anticipation – of what comes or what has been – and a trigger for the imagination – of what was or what will become. Absence, which is one of Glaeser's photographs driving forces, has been identified as one of the singular conditions of the Pavilion. Glaeser's photographs are spectral; like the ghost they 'represent what is not there: a present mark

[80] Derrida, *The Work of Mourning* (Chicago: The University of Chicago Press, 2001), p. 54.
[81] Derrida, *The Work of Mourning*, p. 54.
[82] Nick Peim, 'Spectral Bodies: Derrida and the Philosophy of the Photograph as Historical Document', *Journal of Philosophy of Education*, 39.1 (2005), p. 75.

coincides with absent presence.'[83] Yet the reconstruction also marks an absence, even if trying to fill it. Re-materialising the absent building will be by definition, materialising a non-identical building, which in consequence necessarily signifies the absence of the original.

However, what is really absent in these photographs are the Berliner Bild-Bericht prints. Drawing upon Derrida's *The Work of Mourning* (2001), Glaeser's photographs 'bespeak the unique death, the death of the unique, this death immediately repeats itself, as such, and is itself elsewhere.' Derrida continues, '[they]suspend the referent and leaves it to be desired, while still maintaining the reference. It is at work in the most loyal of friendships; it plunges the destination into mourning while at the same time engaging it.'[84] Glaeser's photographs are belated attempts to enact repetition which, as mentioned before, is here symptomatic due to the loss of the object of desire –in this case is not so much the building itself. What this chapter argues is that Glaeser's photographs are, instead, a manifestation of the possibility of re-enacting the Berliner Bild-Bericht photographs.

[83] Peim, 'Spectral Bodies', p. 77.
[84] Derrida, *The Work of Mourning*, pp. 57, 61.

PART III

9

Re-stagings

> Buildings are not always better than pictures show them to be, nor are they necessarily more significant than the theories that spring around them. It all depends. One of Mies van der Rohe's most famous works, the Barcelona Pavilion of 1929, has been used to illustrate this point ... I began to see the pavilion as a mere phantom, its reputation built on the flimsy evidence of a few published photographs and an inaccurate plan. Then I visited the building after it had been reconstructed on the original site in 1985-6.
>
> POSTSCRIPT: I refrain from commenting on the reconstruction of the pavilion, except to applaud those responsible. Others regard the issues of its authenticity and reproducibility as significant, but I am unable to see why.[1]

With these words Robin Evans introduces and concludes his article 'Mies van der Rohe's Paradoxical Symmetries', published in 1990 after his visit to the reconstructed Pavilion, a building that has been described as, among other things, 'reconstruction, replica, reproduction, copy, genuine copy, interpretation, reinterpretation, duplicate, facsimile, re-building, re-creation, incarnation, clone,

[1] Robin Evans, 'Mies van der Rohe's Paradoxical Symmetries', *AAFiles,* 19 (Spring 1990), pp. 56, 67.

and Phoenix'.[2] Like many others architects and architectural historians, Evans visited the reconstruction of the 1929 Pavilion curious to see and to experience the building at first hand – and, I argue, to experience the Berliner Bild-Bericht materialised as a three-dimensional building, in contrast to experiencing them only as photo-reproductions.[3] This is also the case of Victor Burgin (as seen in Chapter Eight), and of Alison and Peter Smithson, who visited the Pavilion while it was undergoing reconstruction. Their encounter with the building was described as determined by the 1929 photographs: 'The first impression upon entering the Barcelona Pavilion while under reconstruction is that it is all one-third larger than the pavilion-image that the photographs formed in one's mind ... my eyes [had] been conditioned by the photographs.'[4]

In this chapter I propose to understand the visits of Evans, Burgin and the Smithsons to the reconstructed Pavilion as returns, as I also did with Banham's visits to the elevators in Chapter Four. These returns are characterised by the need to experience the buildings first hand in contrast to the bi-dimensional familiarity of the repeated photo-reproductions. As the encounters of Evans and the Smithsons with the building demonstrate, there is an evident association of the building in response to the photographs. Their words, together with the sets of photographs they produced during their visits, lead me to argue that these are returns to the building as much as they are returns to the Berliner Bild-Bericht prints, the photographs that 'conditioned their eyes' in Alison Smithson's description. This is also the case of Glaeser, though his return was not to the building but was instead characterised by the absence of it. While Glaeser's photographs explore the site between reconstruction and demolition, the photographs of Evans, Burgin and the Smithsons return to the Pavilion post-reconstruction. Bringing all these returns together is the compulsion and curiosity of visiting a building (and a site) only known through its 1929 canonical

[2] Remei Capdevila-Werning, 'Every Difference Makes a Difference: Ruminating on Two Pavilions and Two Modernities', in Capdevila-Werning et al. (eds), *Mies van der Rohe: Barcelona 1929* (Chicago: University of Chicago Press, 2018), p. 203.
[3] Though Dodds makes a similar claim, Dodds doesn't claim that Evan's returns to the Berliner Bild-Bericht which is the argument being done here.
[4] Alison and Peter Smithson, *Changing the Art of Inhabitation* (London: Artemis, 1994), pp. 35–37.

photographs. In these cases, the building and the building site were re-photographed, generally re-enacting the 1929 photographs and complementing them with other shots that try to find something concealed by the 1929 Berliner Bild-Bericht, or to find through photography some of the many characteristics that have defined the history of the Pavilion, including, among other things, its reflective nature.

The new photographs of Evans, Burgin and the Smithsons are also symptomatic of a new body of criticism, of artworks, of film and photography that proliferated following the Pavilion's reconstruction; Burgin's video installation *Elective Affinities* (2000–2001) is an example. Some of these were commissions of the Fundació Mies van der Rohe housed at the Barcelona Pavilion which fostered a post-reconstruction programme of art and architectural installations in the Pavilion that 'aim to maintain an active dialogue ... giving sense to the Pavilion's continuing topicality'.[5] The work of SANAA (2011–2012), Muntadas (2009) and Ai Weiwei (2009) initiated this tradition and are still some of the most discussed interventions. Similarly, the Pavilion has fostered other sorts of critical installations, such as OMA's *La Casa Palestra* for the seventeenth Milan Triennale where OMA bended the plan of the Pavilion to suggest 'ways of occupying that could be integrated with physical culture in its widest sense'[6] and to demonstrate the proposition that modern architecture is a hedonistic movement. Moreover, there have been a series of photographic works and commissions that have responded to the building's materiality and three-dimensionality. Examples are the photographs by the German photographer Thomas Ruff *D.B.P.02, 2000/2004*, which are part of the series *l.m.v.d.r.* commissioned to Ruff in 1999–2000 in connection with the renovation of Haus Lange and Haus Esters in Krefeld, Germany; *Barcelona Pavilion*, the photographs of Canadian artist Shelagh Keeley commissioned by Circuit Gallery to (2015); or

[5] Fundació Mies van der Rohe Barcelona: www.miesbcn.com (accessed August 2018).
[6] Office for Metropolitan Architecture, 'La Casa Palestra / Town Hall and Library, The Hague' in AAFiles, No. 13 (Autumn 1986), pp. 8.

the photographs of the Pavilion part of the series *Enclosures* by Thomas Florschuetz (2001–2003) (see Figure 9.1 a-c).

In response to Banham's observation to 'never talk about anything you haven't been to see', and drawing upon semiotics and structuralism that have 'allowed us to see that – to paraphrase Roland Barthes – the reality of an object is not exhausted by its phenomenal existence, but extends into each and every representation of it', Adrian Forty has argued that

> we have works and we have photographs, and it is not that the photograph is simply a poor substitute for the work, but rather that it is another facet of the work's being, and one that can be thought about in its own right; as a result, of course, the work is never "finished" – as long as images of it continue to go on being produced, it will, so to speak, always be still in development.[7]

However, the Pavilion poses a different challenge. It was precisely because photographs could not be produced after the building's dismantling that the Berliner Bild-Bericht, as the only prints, substituted the building in its absence and became consolidated as an example of the photographic canon. The reconstruction of the building brought with it the compulsion to revisit and to re-enact the Berliner Bild-Bericht, as we see in the case of Evans and the Smithsons, but this is even visible in social media where re-enactments of the Berliner Bild-Bericht prints of the Pavilion still proliferate. The photographic works created after the Pavilion's reconstruction therefore expand as much as they create a whole new body of work around a building, a phenomenon symptomatic of the canonical status of the building and of its photographs and one that re-establishes them as canonical.

[7] Adrian Forty, 'Future Imperfect', inaugural professorial lecture, delivered at UCL in December 2000, in Iain Borden, Murray Fraser and Barbara Penner (eds), *Forty Ways to Think About Architecture* (Chichester: John Wiley, 2014), p. 18.


a.

b.

c.

Figure 9.1. (a) Barcelona Pavilion from the *L.M.V.D.R.*, Ludwig Mies van der Rohe Series. Source: www.josephklevenefineartltd.com (accessed September 2018). (b) Thomas Florschuetz, *Enclosure III: View of the reconstructed Barcelona Pavilion, Spain*. Archival reference no. PH2002:0003, Centre for Canadian Architecture, Montreal. Photograph by author, 2014. (c) Shelagh Keeley, *Barcelona Pavilion VII*, 1986/2012. Source: www.circuitgallery.com (accessed September 2018).

This chapter explores Robin Evans's return to the 1986 Pavilion and his interpretation of it through his photographs. It argues that it is through the agency of these new non-canonical photographs – materialised as 35mm slides – that Evans's new interpretation of the building was prompted, an interpretation that the building holds vertical asymetries and, more importantly, a horizontal symmetry. Conversely, it will demonstrate how the handling of the slide as a material object and the projection optics of the 35mm slide projector prompted Evans's 'revelation'. Furthermore, it will demonstrate that restaging Evans's use of the 35mm slide – a process that included the reproduction and projection of Evans's slides – is necessary to visualise his argument.

While exploring the Pavilion and the grain elevators as examples of the photographic canon, my process of research has shown that, despite the repeated instantiations of (the same but different) photographs of the two building structures, the approximation to the material and the method of investigation was tied to each of the investigated photographs and derived from the specificities of the material itself. This applies in the case of Evans, but it has also applied in the cases considered in all the other chapters. This methodological approach prompted a diversity of conclusions in each of the chapters that frame a debate about what photographs and their histories can be and do. Additionally, letting the material 'speak back', in Mieke Bal's words, led me to practise 'differently': to resist the interpretation of the photographic

canons as photo-reproductions only – which is what historically has defined their chain of repetition – and instead to engage with the material subjectively by handling, manipulating and restaging it. Using Evans as the first example, this chapter will conclude by demonstrating how aiming to 'difference' the photographic canon, to use Pollock's terminology, led me to practise 'differently'.[8]

9.1 Robin Evans's 35mm slides

The 35mm slides that Evans produced when visiting the Pavilion are now housed at the Architectural Association in London; they sit next to Banham's slide collection on a shelf in the small, quiet photo library. Together, both collections contain approximately 7,000 slides. This amount seems surprising at first, as Evans is not usually remembered as a historian with a strong use of photography – despite his obsession with representation and media – and Banham is better recognised for his writing. But my archival research has clearly evidenced that the 35mm slide was an indispensable tool for both that they extensively used for personal and/or academic purposes.

Evans's (and Banham's) 35mm slides are now archival material; projecting them is not permitted.[9] It is difficult to grasp their agency, to understand how they are experienced when reproduced as projections, and thus to understand their

[8] My use of this term is inspired by the feminist collective *Taking Place* from whom I here draw, and who were inspired by Luce Irigaray's legacy of how difference can become something else, and how it can be used to take a different position and lead to practise differently. In their words: 'From the perspective of our feminist practice in architecture, practising difference has evolved into practicing differently. Taking place *differently*': Teresa Hoskyns, Doina Petrescu and other mixed voices, 'Taking place and altering it', in Doina Petrescu (ed.), *Altering Practices: Feminist Politics and Poetics of Space* (London and New York: Routledge, 2007), p. 36.

[9] Robin Evans's folders are numbered: boxes 1–19 contain a variety of images taken for lectures; boxes 20–21 contain the graphic material collected as illustrations for two of his books, *The Projective Cast* and *Translations from Drawing to Building*. In all archives visited, the experience was determined by how much I could handle the material. In the case of the slides, to project them was not a possibility. If trapped inside the projector and damaged they would be lost and irreplaceable.

spatial and temporal nature. This archival status of the 35mm slides is ironic; only until recently the 35mm slide was produced in large numbers, used on a daily basis in lectures, and considered as an ordinary everyday photographic media. Moreover, it is also ironic that to be able to reproduce them they have to be copied; that copying by analogue means proves laborious and expensive;[10] and that it is now also difficult to show them because their reproduction technologies are rarely available.[11] These are some of the limitations that define the 35mm slides today and that have informed the way in which they have been used by architects and historians who have had access to these collections – they are used as representations only.[12]

Robin Evans' largest collection of slides is of reproductions of Renaissance paintings, drawings and buildings; their slide mounts are all meticulously annotated to describe the architect or artist, and the work's date and location.[13] This collection is still today organised in the form of linear narratives for lecturing purposes. However, the German Pavilion by Mies van der Rohe and Lilly Reich in Barcelona is the building that appears most often. There are numerous 35mm slides that copy the Pavilion's 1929 photo-reproductions as well as an important number of slides shot by Evans when visiting the Pavilion's reconstruction in 1986 (see Figure 9.2).

[10] See Chapter Four for a description of the process of reproduction of Banham's slides provided by the Architectural Association Photo-Library.
[11] This was the case with the projection performance at the CCA in October 2017. The CCA archive did not have the means for reproduction, since slide carousels and projectors were broken and no longer in use. Concordia University had to lend one of theirs for the projection to take place.
[12] See Joseph Bedford, 'In Front of Lives That Leave Nothing Behind', *AAFiles*, 70 (2015), pp. 2–18. Here slides are scanned, and they appear with their mounts, but the emphasis is placed on their representational content. In the same way, Nigel Whiteley has used some of Banham's slides for his book *Reyner Banham: Historian of the Immediate Future* (Cambridge, MA, and London: MIT Press, 2002), although here they appear without mounts and are cropped as any other photo-reproduction would be.
[13] At his home, however, he kept an important collection of slides that narrate an as yet untold story of his years in Nairobi. I am grateful to Janet Evans for welcoming me to her home and allowing me access to all of Robin Evans's slides.



Figure 9.2. Example of slide sheet where the German Pavilion in Barcelona appears as it does in its 1929 photo-reproductions and as a series of photographs shot by Evans when visiting its reconstruction. The yellow Post-Its signal the slides to be copied for my performances. Source: Architectural Association Photo-Library.

Within Evans's collection, slides of the Pavilion also surface between abstract paintings, neoclassical structures, Renaissance perspectives, romantic boudoirs, and contemporary architectural drawings. This demonstrates not only Evans's permanent curiosity in the building, but also his own research process and projection strategy that led to an interpretation of the Pavilion that was primarily informed through typological studies.[14] This method, according to

[14] 'The imperative to understand architecture through typological contexts like these was not, however, unique to Evans, as the mid-1970s saw a historicist turn both at the AA and elsewhere. Neo-classical precedents were frequently plundered for inspiration by architects of varying creeds and associations, but whereas such plans would be described by someone like Colin Rowe in a

Andrew Higgott, photo librarian of the AA at the time, had other implications: an urge to present buildings and arguments in a visual way that is useful to the lecture's audience;[15] and further, to reveal 'whole other patterns of thinking others had overlooked' as Robin Middleton has claimed.[16]

9.2 Robin Evans's 'revelation'

In 1990 Evans published 'Mies van der Rohe's Paradoxical Symmetries' in the *AA Files*. This article contains Evans's interpretation of the Pavilion after years of lecturing about it, but also after visiting its reconstruction in 1986. Evans's article makes clear how photography, and more precisely the 35mm slide and its projection technology, determined Evans's reading of the building. It was through photography and the handling of the 35mm slide that Evans could identify an overlooked characteristic of the Pavilion: its horizontal symmetry. Under the subtitle 'The Horizon', he wrote:

> Perusing the slides I had taken of the reconstructed pavilion, I found it difficult to decide which way they went up – an artefact of photography, no doubt. Then I changed my mind. It was not an artefact of photography, but a property of the pavilion itself, a property of which I had not been conscious while there. The photographs had made it easier to discern.[17]

Evans claims that it 'was an artefact of photography' to then counter argue that 'it was a property of the pavilion itself' that revealed the overlooked horizontal symmetry of the Pavilion. However, against Evans's last remark I want to argue that it was not only the property of the Pavilion that prompted his interpretation; in addition, it was the 35mm slide as a material object and the slide projector assemblage that informed his distinctive reading of the building.

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formal vocabulary that emphasised the underlying grids and A-B-A rythms, or by Leon Krier as blueprints for a modern ideal society, Evans would always seek to link formal and spatial topologies to normal norms and patterns of behaviour prompted by ideology': Bedford, 'In Front of Lives', p. 13.

[15] Interview with Andrew Higgott, Barbican, London, 2 March 2017.

[16] Robin Evans, 'Robin Evans Writings', *Translations from Drawing to Building* (London: Architectural Association, 1996), p. 280, quoted in Bedford, 'In Front of Lives', p. 5.

[17] Evans, 'Mies van der Rohe's Paradoxical Symmetries', p. 63, reprinted in Evans, *Translations from Drawing to Building* (London: Architectural Association, 1997), p. 258.



Figure 9.3. Double projection of the Pavilion's horizontal symmetry. On the left: the Pavilion 'upside down'. 'Lights on, projector off, first slide please', performance at CCA/Montreal, 14 October 2017. Source: Photography by author.

This came more strongly to the fore when I re-enacted through projection some of his lecture sequences. As part of the CCA performance 'Lights off, projector on, first slide please', I used double projection to make visible Evans's argumentation. Unlike my re-enactments of Banham or Gropius, I had no manuscript or slide list to follow. I had freedom to interpret and construct the performance itself. The pleasure here was to construct a projection performance with Evans's slides that would show how his interpretation of the Pavilion was based on his use of the 35mm slide. My performance was based on his 1990 article, his slide sheets, and a couple of lectures he delivered at the Architectural Association before the reconstruction of the Pavilion.[18] The result was a five-

[18] To access the few digitised lectures from Evans, see https://www.youtube.com/user/AASchoolArchitecture/search?query=robin+evans (accessed 5 May 2018).

minute sequence of single projections that illustrated how the Pavilion appeared, inserted between historical examples, accompanied by my voice narrating my archival experience, and followed by a series of double projections that demonstrated how, by turning the slide upside down, the horizontal symmetry of the Pavilion is made manifest (see Figure 9.3).

Conversely, there are two annotations on two different slide mounts that led Evans to this argument: 'this way up' and 'annotation of horizon' (see Figure 9.4). By writing 'this way up', Evans was emphasising the particular orientation in which the slide needs to be projected (which does not necessarily correspond to the building's orientation), thus encouraging a distinctive way of seeing the Pavilion. The performance proved that this is emphasised when projecting in a specific sequence: first, the Pavilion appears projected as it stands; then it is projected upside down (as Evans did); and then both images are projected next to each other (as my performance did). This shows that there is almost no difference between one and the other. Furthermore, and as an annotation to himself, 'this way up' makes clear in which direction the slide has to be inserted in the carousel for the lecture's audience to see its projection the desired way.

These annotations refer to the challenges faced when handling the transparency and mounting it in a generic white plastic frame. Generally, a slide frame – and this is evident in Evans's collection too – contained a Kodachrome or Ektachrome stamp, or the name of the institution from where it was purchased: the Courtauld, the British Museum, and the Tate are just three examples (see Figure 9.5). While the first form of stamp names the type of film used, the institutional stamps act as the material evidence of commercial practices of purchasing slides, practices that had already been consolidated at the end of the nineteenth century (see Chapter Three). Both types of stamp define the slide's orientation.

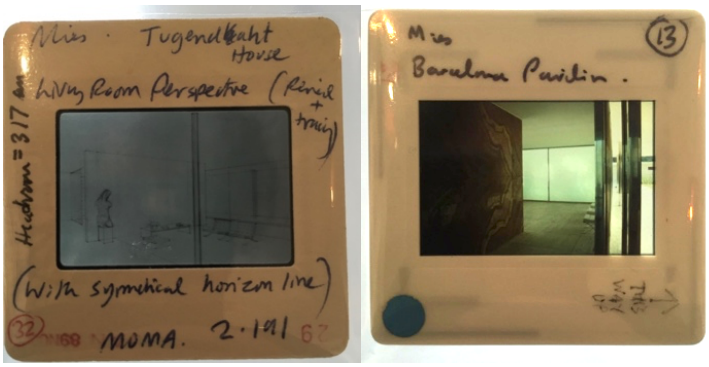


Figure 9.4. Slides with annotations that give an account of the Pavilion's horizontal lines and symmetry. Source: Architectural Association Photo-Library.

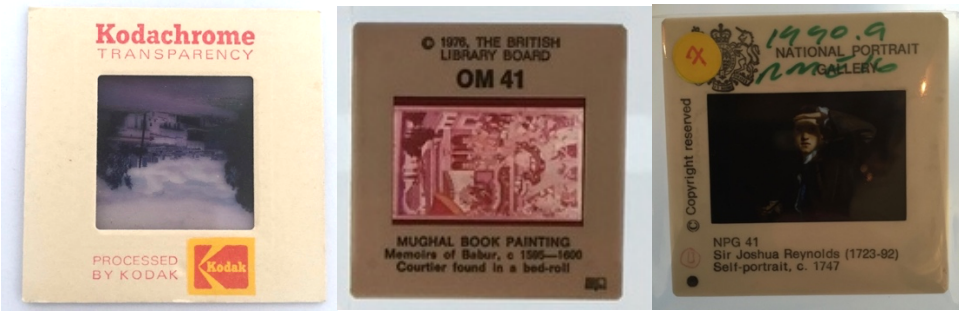


Figure 9.5. Examples of purchased and mounted slides. Source: Architectural Association Photo-Library.

Evans usually mounted his slides and anticipated the linear narrative of their projection when organising his carousels.[19] It is thus easy to imagine the difficulties he faced when trying to project its image with the accurate orientation, and specifically, on account of the building's horizontal symmetry, to find the orientation of the Pavilion before inserting it in the white mount, especially when it was mounted in a white abstract frame without directions for *up* or *down*; or the difficulties of trying to insert the slide in the carousel when the *up* of the building must be placed facing *down*, and the *front* must be facing *back*. Furthermore, it is possible to imagine the difficulty faced when rotating the slide 180 degrees around a horizontal axis in order to project it correctly (since slides had to be loaded in the carousel magazine upside down); if the optics were such

[19] Interview with Janet Evans on 24 April 2017. Janet Evans described how much time and dedication Robin Evans gave to the organisation of his slide collection and the narratives that he would put together for lecturing purposes.

that the rotation had to be about a vertical axis, the perception might have been quite different. Although these were general difficulties of working with slides, working with a building that is horizontally symmetrical poses a different challenge.

Further consideration of the nature of the 35mm film used for slides is necessary for a better understanding of Evans's possible disorientation and subsequent argument. Ektachrome, also called a colour positive film known as 'reversal', 'slide' or 'transparency' film, allows seeing through a positive image unlike any of the other Kodak colour negative films available today, and it is different to any photograph printed on paper. Ektachrome was the film used by Evans to record the Pavilion; it is a film that conceals the photograph's and slide's orientation.

Lastly, and importantly, there is another important aspect that led to Evans's recognition of the horizontal symmetry of the Pavilion: the way the frame works in the images that Evans takes as a consequence of the aspect ratio of the 35mm slide frame, since a 3:2 ratio means that the frame is one and a half times wider than it is high and is closer to a square format than to a rectangular one. These limitations frame the building in a particular way, which in Evans's case points to the definition of the eye level of the viewer coinciding with the horizon line in the centre of the composition. This makes the horizontal symmetry of the Pavilion impossible to escape, as illustrated by Figure 9.6(a) where the horizon line coincides with the centre height of the photograph, and by Figure 9.6(b) where Evans's eye level coincides with the centre of the composition. This aspect ratio also implies that the manipulation of the slide is different to other formats, as recognising which side is *up* is already a difficulty. Together with the delimitations of the frame, the aspect ratio of the 35mm images is crucial.

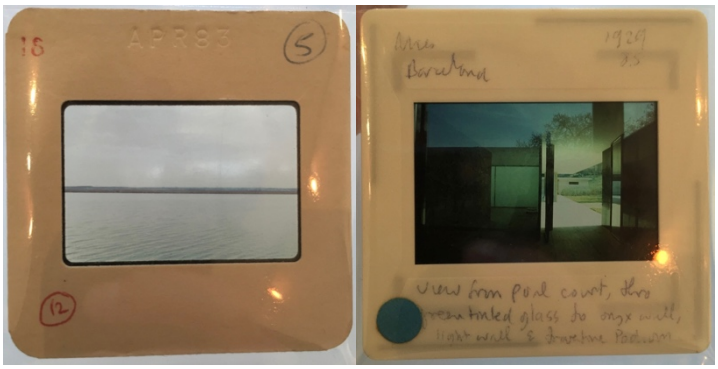


Figure 9.6. Slides from Robin Evans's slide collection, one (a) depicting a horizon line, and (b) bringing to the fore the question of the eye level (reflection of Evans can be seen). Source: Architectural Association Photo-Library.

I experienced these difficulties in the process of organising the slides for the projection performance, to the extent that I could only realise Evans's argument about the horizontal symmetry of the Pavilion when I was handling the slides and when, once projected, one was inevitably upside down. This leads me to argue that it is not so much the Pavilion, as it was the building–ektachrome slide-projector assemblage that brought about Evans's 'revelation' of the Pavilion's vertical asymmetry residing in the overall composition of its symmetric components;[20] more importantly, the assemblage revealed the 'horizontal' symmetries – reflective and mirror symmetries more accurately – of the overall spatial composition manifest in the coinciding plane of symmetry of the Pavilion and of the eye level of its visitor (or photographer). This horizontal symmetry was only disclosed by the 'camera-eye'.

[20] This asymmetry is usually associated with the Pavilion's political significance, as argued by Evans and others. In the words of Evans: 'The asymmetry, the tranquil horizontal disposition, the absence of insignia ... are suggestive less of chauvinism than of its deliberate effacement. ... Adamant in its denial of the accepted means of establishing monumental order, the pavilion, read as a metaphor for a nation's disposition, turned something all too readily associated with humiliation into a thing of disarming beauty. The Weimar Republic's stance of conciliation towards the other nations of Europe was expressed in a violent repudiation of symmetry, because symmetry was an architectural convention associated with imperiousness, authority and national aggrandizement. The result: belligerent tranquillity, an architectural oxymoron. Mies liked that kind of thing (less is more)': Evans, 'Mies van der Rohe's Paradoxical Symmetries' (1990), in *Translations from Drawing to Building*, p. 236. See also Josep Quetglas, *Fear of Glass: Mies van der Rohe's Pavilion in Barcelona* (Basel: Birkhäuser, 2001); K. Michael Hays, 'Critical Architecture Between Culture and Form', *Perspecta*, 21 (1984), pp.14-29; Manfredo Tafuri and Francesco Dal Co, *Modern Architecture / 1* (London and New York, Faber: 1986).

9.3 Doing it 'differently'

Practising 'differently' is one of the underlying conditions of this study. Emphasised throughout my work, it is also made manifest in the many instantiations in which these sets of photographs have been explored by others. For instance, a close attention to materiality – probably unconscious in Evans's case – prompted a renewed interpretation of the Pavilion; handling the slide as a material object that is defined through projection disclosed the Pavilion's horizontal symmetry. Paying attention to the material has been one of the means of research in this research, as well as being the vehicle to explore alternative options to the naturalised canonical photographs. Materiality has had an agency in the making of arguments. Conversely, to emphasise the material form as a form of research leads me to argue that within architectural history and criticism photography should not be understood as photo-reproductions only, nor as solely indexical representations. This thesis calls for attention to the multiple materialities, temporalities and iterations that photographs have, as well as to the many sites they inhabit and migrate from and to. In this study, just some of these have been addressed: lantern slides, 35mm slides, thumbnails, photomurals, projections, snapshots, retouched photographs, and photo-reproductions; lecture manuscripts, lecture halls, photo-albums, photo-books, commercial catalogues, journals, architecture books, private collections and archives.

Another way of addressing 'difference' and practising 'differently' was prompted by my encounter with the photograph's material qualities, which in return urged a creative response different to the one that has characterised the historical investigations of these two photographic canons. Encountering lantern slides (Chapter Three) and 35mm slides (Chapters Four and Eight) fostered a series of re-stagings through projection. My approach was to project; to demonstrate that when we speak of a slide show, we are speaking of outdated though revolutionary

photographic technologies;[21] we are speaking of the singularity of the 35mm slide and of the late nineteenth-century lantern slide as photographic material and as a medium different to the printed photo-reproduction. However, the 35mm slides and the late nineteenth-century lantern slides differ as technologies of reproduction and in their material definition. Although both were intended to be materialised and experienced in public and private entertainment scenarios, today they resonate as forms of audio-visual experience that more frequently speak to art, near-art and non-art experiences.[22] This is mainly because it has been within art discourses that this medium has been addressed in recent years as a critical media; it has rarely been addressed as such within architectural discourses.[23] However, as evident in Gropius's case (Chapter Three), architecture has followed the arts, for instance reproducing the format of the lantern slide art history lecture in its beginnings as a modern discipline.[24]

[21] More precisely, we are speaking of the technology of a slide carousel like the one Kodak introduced to the market in 1961 and removed in 2004 when Kodak ceased its manufacture; of 35mm Kodachrome films that Kodak introduced in 1941 and discontinued around 2012; of Ektachrome reversal film introduced in 1946, also discontinued around 2012 (although it is apparently being relaunched in 2018); and of slide projectors more generally that date from the 1930s but became popular in the 1950s when people magnified their vacation holidays and family albums onto home screens and walls as if in a cinema theatre. See Alice Rawsthorn, 'It's a Spaceship! No, It's a Time Machine', *The New York Times*, 20 January 2013, http://www.nytimes.com/2013/01/21/arts/design/its-a-spaceship-no-its-a-time-machine.html (accessed 7 November 2017).

[22] Martha Langford, 'When the Carousel stops turning... What shall we say about the slide show?', in Larisa Dryansky, *Intermédialités — numéro 24, numéro 25, automne 2014 2015printemps 2014 2015 — projeter*: http://id.erudit.org/iderudit/1034158ar. DOI 10.7202/1034158ar

[23] Though extensively used by architects and architectural historians in the 1980s and 1990s, the agency of the slide was more present within the art scene, as it was not only a representational or disseminating tool, but it was also the artwork. The work of artists such as Robert Smithson, Gordon Matta-Clark, Dennis Oppenheim, James Coleman and Ana Mendieta is particularly telling in this context. See Rose Finn-Kelcey et al., *Signs of the Times: A Decade of Video, Film and Slide-Tape Installations in Britain* (Oxford: Museum of Modern Art, 1990); Frederick N. Bohrer, 'Photographic Perspectives: Photography and the Institutional Formation of Art History,' in Elizabeth Mansfield (ed.), *Art History and Its Institutions: Foundation of a Discipline* (London: Routledge, 2002), pp. 246–59; M. Darsie Alexander (ed.), *Slide Show: Projected Images in Contemporary Art* (University Park, PA: The Baltimore Museum of Art and The Pennsylvania State University Press, 2005).

[24] Similar work has been done and published as: Catalina Mejía Moreno, 'The "corporeality" of the image in Walter Gropius *Monumentale Kunst und Industriebau* Lecture', in *Projecter/Projection*, *Intermedialités, Histoire et Théorie des Arts, des Lettres et des Techniques*, Université de Montréal (7 December 2015) DOI: 10.7202/1034165ar; Catalina Mejía Moreno, 'Walter Gropius's and Reyner Banham's grain elevators as art-objects', in Katie Lloyd Thomas, Tilo Amhoff and Nick Beech (eds), *Industries of Architecture* (London: Routledge, 2015), pp. 25–36.

What seems to remain within the realm of architecture are those technologically mediated images projected as a form of architectural education, where projected photography rather than photo-reproductions played a determinant role in educating architects, art historians, and interested/educated audiences. Their performative nature and the experience of sitting in a darkened lecture hall observing a sequential double slide projection, listening to the disembodied lecturer's voice asking 'next slide please', accompanied by the repetitive clicking sound of the projector and the hushing sound of its ventilator, is recognised and strongly remembered by those who experienced it. Yet it also resonates in other more private but still collective settings: in the powerful way in which slide shows turned walls into giant screens for all kinds of familiar and unfamiliar subjects, and in situations materialised more permanently in Mies's wallpapers and architectural exhibitions.

Three re-stagings informed and shaped this study. The first was a means of recontextualisation and visualisation, through projection, of Gropius's 1911 lecture. It took place in 2013 in Newcastle University in the context of the yearly exhibition of PhD projects (See Figure 9.7). The second restaging was the lecture 'If we can have the first slide and the lights off', delivered at the Architectural Association in London,[25] where, by using copies of the slides from Robin Evans's and Reyner Banham's archives, I invited a reassessment of the importance of the slide show and of the 35mm slide as a medium for the history, theory and practice of architecture (See Figure 9.8). And the third restaging was the slide show performance 'Lights off, projector on. First slide please' at the CCA in Montreal in October 2017 and part of the event *Talking Pictures: A Circuit*, which emphasised both the understanding of the 35mm colour slide as a material object with a distinct agency and the importance of the slide beyond its photographic nature as a mere representation. It called for the attention to the slide as a photographic image that, with the help of the projector, performs

[25] Lecture delivered at the Architectural Association in London, 9 May 2017: http://www.aaschool.ac.uk/VIDEO/lecture.php?ID=3669

spatially, addresses a collective audience, and is to be seen as an enlarged, ephemeral and temporal version of its hand-size material reality (see Figure 9.9). None of these performances were re-enactments.[26] Rather, they were re-stagings: they were not concerned with the 'originality' but with what can be known about the event, and they aimed to activate history from within the present.[27] They aimed to prompt a different understanding of the relationship between architecture, architectural criticism and photography beyond the printed space of the page, emphasising its changing scales and its varied temporality. It was also a means to 'difference' the canon by focusing on the photographic objects' materiality (as a spatialised, temporal and collective experience) and the alternative interpretation of the Pavilion and the elevators produced as a result.

With the exception of Evans in the case of the Pavilion, my encounter with the photographic objects in their different paper-based iterations prompted a different set of practices. For example, it was evident when I explored Mies's visibly retouched photographs (in Chapter Six) that redrawing would be a way in which I could relate to the surface of the archival photographs and to its distinct materiality as a drawn-over-photographic depiction. I could dialogue with that which, although effaced by publication and reproduction, has been worked; to what Justine Clark has described as the 'underside' of the drawing.[28] The intimacy with the retouched image as found at the Berlinische Galerie, and the impossibility of reproducing and restaging the faithfulness of that experience in the few snapshots I could take with me, led me to try different forms of reproducing what I had then experienced. Initially, drawing over the retouching

[26] For the relevance of reperformance and re-enactments, see Sophie Read, 'Architectural History as Performative Practice: Reading and Writing John Soane's Lectures (1810–1836)', PhD thesis, Bartlett School of Architecture (2018).
[27] For the relevance of re-enactments as an art-practice, see Amelia Jones, 'The Now and the Has Been: Paradoxes of Live Art in History', in Amelia Jones and Adrian Heathfield (eds), *Perform, Repeat, Record* (Bristol: Intellect, 2012).
[28] For the relevance of observing the material qualities of drawing usually erased for publication, see Justine Clark, 'Smudges, Smears and Adventitious Marks', *Interstices*, 4, pp. 1-8, url:http:architecture.auckland.ac.nz/common/library/1995/11/i4/THEHTML/papers/clark/ (accessed July 2009). See also Katie Lloyd Thomas, 'Building while being in it: notes on drawing 'otherhow', in Petrescu (ed.), *Altering Practices*.

traces was a means of understanding how the ideological processes of alteration had been constructed; I redrew over that which had been redrawn, and I tried to repeat the retouching patterns and the process as a whole to embody the craft and labour involved in its making to understand the production of such an image.



9.7



9.8



9.9

Figure 9.7. Performance, Newcastle 2013. Figure 9.8. Lecture/performance, Architectural Association 2017. Figure 9.9. Performance, CCA, 2017. Source: photographs by author, Valerie Bennet and Robert del Tredici.

I followed a similar process for Ludwig Glaeser's empty site photographs; however, in this case my way of relating was through a process of cutting, pasting, cropping and inserting which, in return, emphasised that which was absent – the building, but more importantly the Berliner Bild-Bericht. At the same time, it was a dialogue with Glaeser: a way of trying to figure out what exactly he was trying to capture through these snapshots. Equally, in the case of the photomural (Chapter Seven), I also made a series of drawings that retraced the construction of the exhibition space as well as the perspectival nature of the photomural within, to visualise how they collided and how Eames's photograph was disclosing through the camera lens that which Mies had aimed for with his photomontages. Furthermore, the fleeting presence of the woman as the spectator passing by in contrast to the static sculpture signalled to a temporal disjunction where the role played by the photomural was not one of bridging but of distancing.[29]

However, these processes of redrawing, remapping and cutting and pasting took me to a place I had not inhabited in a long time – that of the drawing hand. Moreover, this new place was defined by the subjective engagement through drawing with a historic document. Drawing, cutting and pasting were means both of establishing a dialogue and of bringing back that which had been effaced, either through processes of reproduction (as in the case of the retouched photograph) or of demolition (as in the case of Glaeser's images). These practices brought to the fore the invisible materiality of the photographs that, due to the repetition of their photo-reproductions, has remained overlooked. They involved noticing the surface, the materiality and the hand and the body that constitute making, all of which usually passes unnoticed. Furthermore, it was a means of resisting the cleanliness and shiny perfection that characterise the canonical photographs, as well as transgressing their distant and hermetic appearance.[30]

[29] The drawings, re-mappings and collages mentioned above were lost in the process of moving house in 2017.
[30] See Catherine Ingraham, *Architecture and the Burdens of Linearity* (New Haven, CT: Yale University Press, 1998); and Clark, 'Smudges', pp. 1–8.

To consider these processes is, according to Justine Clark when referring particularly to drawing, to 'consider other ways of looking, different approaches to drawing, and by extension to architecture'.[31]

Drawing upon Catherine Ingraham's description of the drawing as a 'lament', my engagement with the photographic prints aimed to 'verify without gap the presence of the object in space, the building, the body, the thing, whatever'.[32] Furthermore, I wished to refer to the actions of making and of process that these photographs embody and that is absent in all photo-reproductions. Conversely, these processes also became a means of critique in an attempt to 'place my own alienation' with these photographic canons – to adopt Katie Lloyd Thomas's words that relate to her use of her drawings as a means to critique architectural orthography from a feminist perspective.[33]

These re-stagings identify a subjective criticism, in contrast to the usual 'distant' critic and critical objectivity, and they point at the multiple critical voices entailed in the construction of criticism as a means to do so.[34] They consider the role of the subjective viewer, embodied by the researcher who encounters and works with the material, but also by the lecturing critic and even the attendee in the lecture hall. These viewers are active agents in the construction of criticism and the relay of subjective voices that surfaced in this thesis: the voice of the architect, moving into the voice of the critic and then into the voice of the researcher.[35] In this context, these re-stagings are all about myself. The performances are my ways of relating, critiquing, and returning to historical

[31] Clark, 'Smudges', p. 5.
[32] Catherine Ingraham, 'Losing it in Architecture', in Francesca Hugues (ed.), *The Architect, Reconstructing her Practice* (Cambridge, MA: MIT Press, 1996), p. 160.
[33] Lloyd-Thomas, 'Building while being in it', p. 92. See also Katie Lloyd-Thomas, 'Lines in practice: Thinking architectural representation through feminist critiques of geometry', *Geography Research Forum*, 21 (2001), pp. 57–76.
[34] The work of Hélène Cixous, Maggie Nelson, Jane Rendell, Katherine Bonnevier, Giuliana Bruno and Katja Grillner have informed the thesis in this respect.
[35] See Isabelle Doucet and Hélène Frichot, 'Resist, reclaim, speculate: Situated perspectives on architecture and the city', *Architectural Theory Review*, 22.1 (2018), pp. 1–8; and Donna Haraway, 'Situated knowledges: The science question in feminism and the privilege of partial perspective', *Feminist Studies*, 14.3 (1988), pp. 575–99.

narratives and normalised canonical constructions. In these performances it was my voice taking the audience through my encounter with the lantern slide and the 35mm slides collections; my voice was the means of voicing this dialogue. Understood as a return, these re-stagings frame, inform and define the canon's 'becoming' and the alternatives. They are one set of responses to my encounter with this 'photographic canon', and they are propositions for differencing it.



Figure 10.1 Returns. By author, 2018.



Figure 10.2 Returning differently. By author, 2018.

10
Returning

One of the distinct characteristics of canonical constructs is that they prompt returns. In this thesis, returns are made manifest in the many ways in which architects, historians and critics – and myself as a researcher – have returned to the canonical image, to the canonical buildings through reproductions, and to the buildings themselves. We have returned to the Pavilion, to the elevators and to their photographic canon, to study, revisit, republish, reinterpret, and, in my case, to difference their canonical photographs.

Figure 10.1 collects some of the images that give an account of the returns of Evans and Banham, and of my own return. Banham's photographs of the Buffalo and Montreal grain elevators, at different times of the day, from different angles, and in different years, appear in the section above. These are just a few of the photographs that belong to Banham's slide library and that the Architectural Association in London has recently started to digitise so that they are available to a wider audience. This important endeavour is a consequence of the increasing number of requests over the last five to ten years; scholars are, once again, turning to the photographic canon of the elevators, and they are doing so no longer only through the eyes of Gropius or Corbusier, but through Banham's eyes also. This points towards the inclusion of Banham's photographs in the cycle of

repetition that has characterised the canonical photographs of the silos – Banham now belongs to that.

As discussed in this thesis, Banham returned to the buildings in the 1980s, and he used photography to document them throughout the years as part of his extensive research on the subject matter. However, as Figure 10.1 illustrates, despite all efforts to disrupt the early twentieth-century constructs of the elevators as objects of aesthetic awe through his readings of mechanised processes (see Chapter Four), and despite making conscious use of his personal photographs as part of these efforts, Banham inevitably slipped back into the canonical photographs and re-enacted them. In the vertical photograph above, the Kellogg elevator appears as monumental and 'monstrous', echoing Mendelsohn's photographs and description. The elevator from Montreal appears framed as in the 1913 *Werkbund Yearbook*, yet in this case with the presence of the Marche Bonsecours, which interrupts the clean and undisrupted view of the elevator's massive body that distinguished it from the other elevators disseminated in 1913 (third row down – left). The photograph of the Cargill elevator and of the Great Northern elevator still surprise me (first photograph above at the left corner and below centre). The distance, the perspectival point of view and the state of the buildings as seen from far away cannot but remind me of Gropius's selection of images in the 1910s.

Below Banham's photographs are some of Evans's (and Caroline Constant's) photographs of the reconstructed German Pavilion in Barcelona. Evans visited the Pavilion more than once after 1986, sometimes with students, at other times with colleagues. His wife Janet Evans recalls that he went as often as he could. The above selection of 35mm slides are some of the shots he took during these visits. They re-enact the canonical photographs, though this time by means of the reconstructed building – a building whose reconstruction was prompted by the desire to enable a physical and material experience of the 1929 photographs. Despite an evident repetition, they seem to be attempting to find something that

the 1929 photographs conceal. Yet by doing so, they also try to find the 1929 Berliner Bild-Bericht photographs as a 1986 re-enactment.

While in the archive I was always puzzled about the circular blue stickers that appear in the lower left corner of Evans's slide mounts (see Figure 10.1). These stickers indicate how these photographic shots seem to play a distinct role within his slide collection. It was only when I put them together that I realised how this signalling responds, mostly, to the Berliner Bild-Bericht re-enactments, how they either point to the original intention of such re-enactments or manifest an a posteriori acknowledgement of it. The Berliner Bild-Bericht prints conditioned Evans's eyes, and, as Constant's photographs demonstrate, they conditioned architectural culture in general.

Underneath these two examples is a small series of photographs that I made when visiting the reconstructed Pavilion in Barcelona and the elevators in Buffalo. Despite all attempts to capture the elevators in their canonical shots, my photographs of the elevators fail to reproduce the canonical images. The scale of the buildings, the difficulty of accessing them, and the limitations placed by a bus tour full of architectural historians attending the SAH Annual Conference in 2013 trying to do the same made it impossible. What this impossibility made me realise is that the early twentieth-century photographs of the elevators, as well as Banham's photographs, have conditioned our eyes as much as the Berliner Bild-Bericht photographs have, while at the same time they have intensified the compulsion that drove us all there on a freezing April day. Below, the photographs of the Pavilion inevitably represent my frustration when encountering the building – my 'disappointment' to use Adrian Forty's words. After returning to these photographs years after having visited the building, it was clear that the sense of frustration derived precisely from the impossibility of re-enacting the Berliner Bild-Bericht prints. I could only visit the Pavilion at night, and it was raining and about to close. I could not see the Berliner Bild-Bericht prints, and I could not experience the building accordingly.

These returns reveal that the 'compulsion to repeat', which has characterised the history of the Pavilion and of the grain elevators, is by no means disruptive; rather, it is additive, for it perpetuates the chain of repetition. There is a danger in this cycle of returns and repetitions, a danger emanating from the photographic canon and the compulsion to repeat that accompanies it. In architecture, repetition perpetuates the photographs' canonical condition: it normalises and sediments the photographs. Furthermore, this repetition demonstrates our blindness to alternative images, it shows that we rarely look at how the images that we repeatedly use are constructed, and it proves the lack of awareness of the existence of a photographic canon and its contingency. By identifying a photographic canon, and by using the elevators and the Pavilion as examples, this study has argued that it is necessary to make the canon and its power visible, to interrupt the cycle, and to 'return differently'.

10.1 Returning 'differently'

Returning 'differently' is, this thesis suggests, a means of consciously returning to and working with a photographic canon, not with the aim of dismantling it, but instead with a view to differencing it. Relevant here are Griselda Pollock's suggestion of a dual strategy to disrupt, one that seeks to 'difference' the canon by means of including the 'other': by reading selected case studies predominantly from the historical moment of early European modernism through the theoretical lens of feminism, which in this case means interrogating visual representations from historical moments that determined legacies within art historical discourses. Pollock's method has informed this project, because it explores the question of difference by unveiling the 'theoretical and political issues involved not in displacing the canon but in "differencing" the canon, exposing its engagement with a politics of sexual difference while allowing that very problematic to make a difference to how we read art's histories.'[1] However,

[1] Griselda Pollock, *Differencing the Canon: Feminist Desire and the Writing of Art's Histories* (London: Routledge, 1999), p. xiv.

this thesis has instead suggested 'difference' as it relates to subjectivity rather than to questions of sexual difference: the subjectivity of the researcher who encounters the images in the archives, the subjectivity embedded in the labour involved in the making of the images (as in the case of the retouched print in Chapter Six), the subjectivity in the creation and consolidation of an author (see Chapter Five), and the embodied subjectivity of my re-stagings present throughout. This difference is not as the 'excluded other' but as the other alternatives present in this study. This thesis contributes to these debates. It complements them by addressing difference as a condition already necessary to repetition, as Deleuze maintained, and by seeking out difference rather than sameness as a means to question the repetition of historical narratives and practices. This thesis returns 'differently'.[2]

Returning differently is made manifest in three types of differencing that I made use of in this thesis. The first built on Deleuze's notion that difference is always already necessary to repetition. The second type involved alternative images being introduced to the canon. And the third type involved the agency of the photograph as an aspect of the criticism itself.

With regards to the first type of differencing, I have returned to the photographic canon as a critic to uncover and explore the differences between what is apparently only a repetition of the same image. This came to the fore in the initial stages of archival work: all the archives I visited held copies of sets of the same Berliner Bild-Bericht prints, or of the silos as published in the 1913 *Werkbund Yearbook*. However, their material instantiations were always different: they were modern prints, vintage prints, retouched photographs, photographs of photographs – all different but the same. These differences are also product of technologies of photographic reproduction that, while allowing the photographic images of the Pavilion and of the elevators to be widely circulated, nevertheless

[2] '[t]o change perceptions and desires, we must offer differencing stories, more stories that aim to resist all ghettoization, separation and categorization': Griselda Pollock, *Vision and Difference: Feminism, Femininity and Histories of Art* (London and New York: Routledge, 1988), pp. xxi–xxiii.

also differenced the images by giving them the capacity to appear in different sizes and formats. This made it possible for an image to appear in many places at the same time – in archives, the printed press and beyond – as well as at different moments in time.

This also clearly comes to the fore in the 'pre-histories' of the photographic canon of the elevators (see Chapter Two) and of the Pavilion (see Chapter Five). Through investigations of the contingency of the canon formation and of the different forces that conditioned both before and after publication, Chapter Two demonstrated how the photographs of the elevators were differenced in pre-architectural publications through processes of selection, isolation and monumentalisation, all conscious moves made by Gropius before he disseminated these examples publicly. But they were also shaped by the commercial practices that defined their dissemination. In Chapter Five, the search for the authorial voice as a means of conditioning the canon and giving it a status, and the selection of fifteen prints only, were also means of conditioning and differencing the photographic prints from a very early stage.

Another clear example is that of the retouched print (see Chapter Six). In this case, processes of differencing – this time through manual altering procedures before publication – determined the initial dissemination of the Berliner Bild-Bericht and their repeated dissemination thereafter. The corrections and ideological constructions that the Berliner Bild-Bericht underwent through retouching were processes later effaced through reproduction and normalised through repetition, processes that differenced the print before its printed dissemination.

Figure 10.2 is a selection of the material instantiations explored in this thesis. It is an account of my processes of differencing, of paying attention to all these examples, and of visualising my processes of criticism that reveal and attend to differences between apparent repetitions of the same image.

I have drawn attention to the images of Gropius's lecture as a full assemblage and as a sequence of arguments (see Chapter Three). By investigating the lecture's content and format, I directed focus to the difference embedded in Gropius's use of images that are not photo-reproductions but visual or verbal images, that need to be projected and narrated, that can mirror the argument being made only as projected images. By paying attention to the whole assemblage,[3] I have emphasised the relationships between the specificity of the selection of industrial buildings and the nature of the *Lichtbild* that allowed light to go through in such a way that Gropius's notion of corporeality and the corporeality of the image became one and the same, and that were only complete with the audience's attendance, the spatialisation and re-materialisation of the image, and the 'grain' of the lecturer's voice.

I have brought to the fore a retouched Berliner Bild-Bericht to underline the ideological implications that its distinct materiality as a drawn-over photographic print reveal (see Chapter Six). In this case, the intimacy prompted by the image within the archive was special, as it brought out an experiential dimension absent in the repeated photo-reproductions: an 'optical unconscious' that only becomes evident via an unmediated encounter with the retouched image, prompting both a distinct reading of this intermediary condition between the 'before' and 'after' of the photograph's manipulations and a critical subjectivity. Bringing this retouched photograph into this study has also implied inserting a new condition in the chain of repetition that the Berliner Bild-Bericht prints have been subjected to.

I also studied a photograph of a photograph: a photograph of an enlarged photo-reproduction of one of the Berliner Bild-Bericht images within the exhibition space of MoMA in 1947 (see Chapter Seven). I sought difference by drawing attention to its agency within the exhibition space rather than by returning to the same and exploring the photomural itself. I revealed how the camera-eye

[3] Assemblage is here suggested as a work made of different components brought together: Lecturer, voice, *Lichtbildern*, projector, audience, hall, argument, narrative, time.

discloses Mies's montage strategies and alludes to myriad ephemeralities present in the photograph: the wallpaper, the exhibition itself, and even the portrayed Pavilion. It is the 'camera-eye' that, in an almost contradictory manner, freezes in time and space the moment in which the woman visits the exhibition space; it is the 'camera-eye' that brings into play a specificity of time and place and demonstrates the inaccessibility of the photomural; and it is the 'camera-eye' that situates the exhibition and the Berliner Bild-Bericht in a particular time and place, and that photographically represents Mies's strategies to a larger audience. Moreover, this example reminds us that a canonical photograph is today known primarily through its reproductions: it is present everywhere but always different, and it is in no way bound to a unique and stable scale or presentation.

The re-stagings play a critical role as they emphasise the multiple material instantiations of the photographic objects studied, while also acting as my responses to them: they are propositions of differencing (see Chapter Nine). They show how the contexts in which the photographs appear, as well as their agency within these places and spaces, makes the photographs distinct and different to how they are used elsewhere. As a critic, I want to reveal this, and I want to difference the canon by paying attention to these examples.

The second process of differencing in this thesis concerns the insertion of alternative images into the canon. This is something I do as a critic. I have selected photographs from outside the canon – outside by virtue of their materiality and overlooked or as yet unknown – to visualise how powerful the normalisation of the canon has been. Although inserting new images is something that Evans and Banham consciously did, yet it is I who, acting as a critic, suggests them as such.

In their initial approach and criticisms of the buildings, Banham and Evans turned to the Pavilion and the elevators originally through their canonical photographs. Banham used the photo-reproductions of the elevators in his

lectures on megastructures in the late 1970s. Evans used the Berliner Bild-Bericht images in his lectures on geometry and proportion. They later returned to the canonical photographs by literally visiting the building structures, re-photographing them, and thus producing images alternative to the canon. Evans used the new photographs in his 1990 *AA Files* article to revisit his earlier criticisms of the building, but he also used them as a productive tool in the analysis of the building. It was only through his new set of photographs, materialised as 35mm slides, that his 'revelation' of the horizontal symmetry of the Pavilion came to the fore (see Chapter Nine). In the same way, Banham used his own photographs to argue for the reinterpretation of the silos as elevators – thus emphasising their mechanised nature and the processes embedded in them, rather than seeing them simply as silos – which, in Gropius's terms, refer to a monumental and aesthetically defined building (see Chapter Four).

The third manifestation of returning differently pays attention to the question of the photograph as an aspect of criticism itself. In this thesis, photographic criticism is present in the disruption of the modern image by means of a new or alternative image – something that Boris Groys calls the image of the critique of the image.[4] This refers to the insertion of alternative images, as discussed above. It is also present in Banham's projected comparative history and Evans's handling of the slides – the former referring to a method, the latter to the agency of the slide as a material object. And it is manifest in the in-between condition occupied by the retouched photograph and by the empty site photographs, and in the disruptive visualisation of the spatialisation of the Berliner Bild-Bericht. By paying attention to these instantiations, this thesis has suggested the possibility

[4] Boris Groys, *Art Power* (Cambridge, MA, and London: MIT Press, 2008). Previous work (mainly from the 1990s) that identifies the relation between architecture and photography in criticism was not understood as 'photographic criticism'; rather, it addressed only the critical relation between both. See Thomas Schumacher, 'Over-exposure: On photography and architecture,' *Harvard Design Magazine* (Fall 1998), pp. 4–7; and James Russell, 'Fading photographs', *Harvard Design Magazine* (Fall 1998), pp. 44–49. However, in these cases the discussion revolves around the relationship between the architect–photographer and the photograph, as well as around the construction of iconic shots. Naomi Stead has identified a possible photographic criticism as part of the broader questions of architectural criticism in the Australian context: see 'Criticism in/and/of crisis: The Australian context' in Jane Rendell et al. (eds), *Critical Architecture* (London and New York: Routledge, 2007), pp. 76–83.

of a photographic criticism that, instead of critics writing and repeating the same images, concentrates on the conscious selection of photographs to demonstrate how they could be used.

Another mode of photographic criticism present in this thesis involves the critic being aware of the role the photographs are playing in the construction of an argument. For instance, seen against the repetition of the canonical photographs, Banham's insertion of snapshots supports his criticism, interrupting the photographs' ubiquity. Banham's encounter with process images can support his argument against Gropius's original argument. Even using photographs of details of working mechanisms or formal ornaments of the elevators already suggests a form of photographic criticism that is further emphasised by the use of double projection (see Chapter Four). Photographic criticism is also made evident in the isolation of the image from its original publication context to focus on the exterior form of the elevators rather than on their construction process (which is something that Gropius does – see Chapter Three). In the same way, Evans's insertion of his own photographs interrupts the historical understanding of the Pavilion by unveiling the building's horizontal symmetries, and in doing so it acts as his own criticism. Banham and Evans used photography to operate as critics, yet it is I who here suggests that their work and their methods are forms of photographic criticism.

In this conclusion I have suggested that one of the contributions of my thesis is the possibility of returning differently. As a final return, I want to make a further suggestion: returning differently is equivalent to a form of photographic criticism that reveals and disrupts the repetition of the photographic canon, that is interpretative, that introduces new or alternative images, that uncovers an apparent repetition of the same image, that pays attention to how images have been 'differenced' usually pre-publication, and that through re-stagings shows different material propositions that difference. It is a photographic criticism that evidences the process of my own return to the canon, and the means by which I return differently to it.

My use of Benjamin's and Krauss' 'optical unconscious' as a productive tool to interpret the visibly retouched Berliner Bild-Bericht, my reading of Glaeser's empty site photographs and my interpretation of Banham's and Evans's insertion and exclusion of distinct photographic images for the construction of their respective arguments demonstrate a photographic criticism that is interpretative. This thesis also suggests a mode of photographic criticism by means of insertion of alternative images. Although I have addressed above how this has been done by architectural critics and historians Evans and Banham, in my case these insertions of alternative images respond to images selected on the grounds that they are exceptions to the canon. Gropius lanternslides and Banham's 35 mm slides are here understood alternative images. Despite the recent attention they have gained, they don't (yet) belong to the canon; they are images – multiple images – that re-enact, revisit, explore, question those canonical ones. The 1979 photographs of the empty site by Glaeser – though not intentionally conceived as alternative images, or produced with such an underlying purpose – can also be thought of as alternative images. The void, the dust, the emptiness, their frame, and their viewpoints are manifestations of the belated attempts to re-enact the Berliner Bild-Bericht prints. They make visible the consequences of the building's ephemerality, and the absence that, even if underlying all interpretations of the building, had never been brought to the fore in such way (see Chapter Eight). Though they do so in a different way, the striking photographs of the Chicago grain elevators that Gropius shot from a distance in 1928 also speak of that inability to capture the elevators as he had originally introduced them into the architectural canon: they are another manifestation of the impossibility of a re-enactment (see Chapter Two). The 1947 photograph of the exhibition space can also be thought of as an alternative print. The presence of the enlarged Berliner Bild-Bericht print can be further compared to an 'unconscious slip,' as the subject matter of the photograph is not the photomural but the exhibition space, something made clear by Charles Eames in the text accompanying the photograph. However, as conditioned by the canon, to see the Berliner Bild-Bericht is unavoidable (at least for me in this thesis) (see Chapter Seven). This alternative condition is further emphasised through the

photographs' distinctive materiality. They are considered alternative as they are lantern slides (as the ones used by Gropius), 35mm slides (as the ones used by Banham and Evans), hand-retouched photographs (as the ones encountered in the Berlinische Galerie), photographic prints and even photo-reproductions. There are images that have a different agency and therefore perform differently.

Finally, this thesis argues towards a photographic criticism present in the many returns that range from uncovering apparent repetition of the same image to how images have been differenced usually, pre-publication. But more importantly, photographic criticism is present in my own returns that, as re-stagings show different material and photographic propositions that emphasise the spatial and temporal, that have come to the fore as 'in-betweens', and that have, at the same time, prompted a critical subjectivity.

To finalise, this thesis has identified returns as a distinctive characteristic of canonical constructs. It has explored not just how to reveal the canon but also how to difference it. It has looked at the situations in which images are repeated differently, and it has considered the production and insertion of new and different images. It has worked differently with images through the recognition of their own agency – as images that call for a different type of experience. It has developed methods to reveal and disrupt the repetition of the photographic canon and to propose a forms of photographic criticism that differences. This thesis is my journey back to the canon: it suggests that in order to do something analytically and critically new, and to take the risk of suggesting different ways of working with such powerful and normalised constructs, we might have to take the same old road and fall into the circular returns that might lead us to discover how they can offer us something new, and, different.

APPENDIX A

Lecture in Hagen, Westfalen in the Folkwang Museum (CE Osthaus)
29 January 1911

Monumental Art and Industrial Building
[Translation by Tilo Amhoff, Catalina Mejía Moreno]

The attempt to look at the area of the profane industrial buildings within the ~~*high*~~ sphere of monumental art - about this I have the honour to talk in front of you (vor Ihnen zu sprechen) – maybe seems at the first sight ~~*too courageous*~~ ~~*too*~~ *venturous* and needs justification.

It is a comparatively new thought in our time that there is no area of the building art that would be bare of all artistic possibilities of design. In fact the architect today turns with the same interest to infrastructural and functional buildings like to all other conventional building problems. The reason therefore is quite obvious. Completely new tasks have always been determining for the development of the monumental style of a time. Like the space thoughts of the old roman functional buildings, the law courts and the market halls determined the form of basilica and churches like the medieval fortresses where stimulating for the contemporary sacred building art, possibly and new blossom of a <u>new</u> *[underlined by hand]* monumental building art will begin from the huge tasks ~~of our time~~, the ones that technology and industry of today demand. A particular nativeness and mightiness is inherent to the buildings of industry. Impact, strength and austerity are equivalent to the ~~inner~~ organised working life that is being performed inside. They have preconditions for monumentality.

Therefore the assumption to qualify that the large buildings of modern industry to which our best architects have turned to, due to the new formal character can be precursor of a coming monumental style which so far is lacking the necessary ethical or religious foundation.
From this assumption it will be allowed a few terminological preconditions of general nature about monumental art, which partially follow the new art historical concept of Riegl and Worringer, to send ahead as a fundamental scale for later observations:
_____ *[line drawn by hand]*
Art is made by humans for humans. This is an opposition to nature. It tries to transform the absolute condition beauty of nature into a conscious relative beauty. This transformation is done by will. What nature is without will the man tries to strive for with will. As means of

its will are born to desires the urge for knowledge and the urge for design. With those he conquers the sensual and the transcendental world of appearances. While the design desire in men is contrary to the mechanical force of things and appearances according to its nature its positive towards life, constructive and productive, is the desire for knowledge penetrates the world of appearances, it is say no to life, dissolving and critical. Both strive in to meet in a final ideal endpoint.

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The area of art, the monumental art of the genius – that alone we want to have a look at – its starts only there where knowledge and representation of transcendental appearances start. It has nothing to do with the representation of the sensual world with the child-like play desire to imitate nature, ~~which accompanies it,~~ it does not give a naturalistic illusion of reality but a wilful subjective revaluation of reality; it is rooted in the mental ideal needs and satisfy mental needs in man. In principle it has nothing to do with material needs. The task is, the representation of higher transcendental ideas with material means of expression, which belong to the sensual world of space and time. The material is the element from which the artwork will have to be created, its not the artwork itself. Matter in itself is dead and without character, only form gives life, which the creators will of the artist gives. "In this leave, in this stone" says Michelangelo, "gets no content that I don't want to put inside". The will also orders chaos, makes random things necessary, unordered things rhythmic. The artist can't ~~use~~ use any element of reality in the artwork in the state in which he finds it. In matter as such therefore are no art laws, but it subsumes itself in the artwork next to the laws of its own nature also to those of art. If a creative will force it to do so. ~~It becomes a useful element~~

P. 4

~~in which the will is enforced.~~ It therefore also doesn't have an art value by nature that will not be carried into it by man. The value of the artwork only consists of a mental satisfaction of an inner urge for salvation not in the value of the materials. For its creator and observer the art work means a rest from the confusion of the world image, a pacifying of the Faustian longing: "Where do I grasp you, endless nature?" The consciousness of being lost in the stream of objects and events decreases momentarily when man tears out the passing thing out of space and time in order to eternalize it, to fix it unmovable in an absolute clear closed off form. The artwork becomes the victory of man in the fight with the nature object. The impersonal nature is being mastered by the personal will.

The creation of the artwork therefore requires personality. The power of the genius. The genius alone has the power to bond the terrestrial by something extra-terrestrial, to make visible the unexplored. It grasps the spirit of the cosmos and binds it in bodily form. Only the genius creates truly monumental art work, which can continuously down into the everyday life influence all other art expressions. From them radiates not beauty but inapproachable force. "It is art" says Peter Behrens "which you can't love and embrace it in your heart in front in which you kneel down

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Which makes us shiver, which through to its sheer size overwhelms us mentally. So big is the power of the proportions gathered by the genius that it forces onto any observer without selection the wanted state of the soul.
[hand drawn line emphasising importance on the left hand side of the page] But we don't know any inner that would not be given an outer. We can only bring to expression the spiritual ideas in art with the help of material means because we are bound to the terrestrial world of appearances. These material means are of different nature. The design desire of man pours itself across the whole universe. It forms not only the material, visible things of space, which only come into question for the applied artist but every appearance of the surrounding world which can be perceived with the senses. Music and poetry are immaterial, here the artist forms elements in time. The time and space elements remain in the unordered chaos until the artist by the power of tis will force a lawful order onto it. They offer a resistance trough their state of latency.

—

But all values created by reason and enlightenment, the developments of progress of technology, economy, hygiene are resistances of material kind which are positioning themselves against the artistic will and have to be overcome by it. Because every finished product of the will of somebody else which no longer sleeps unborn within the individual belongs, following the eternal evolution, to the cosmos. So it becomes the material motif for the new creators will of the other individual

P. 6

that is in itself without life and first has to be filled with new life by the genius. Beethoven created from the smallest motif of existing village music a monumental art work. Out of which the inherited treasure of Hellenic motifs, Schinkel could only create new living buildings through the force of proportions. ~~whose monumental art value nobody can question anymore.~~

[drawn squiggle along this paragraph on the left margin of the page] We believe to recognise – to sum up the thoughts one more time – that the beauty of the artwork is based on an inner invisible lawfulness of the creative will, not on the natural beauty of the material and that all material things are only means by with whose help a higher mental state which is the art will (Kunstwollen), given sensual expression. *[hand signal to break this paragraph in two]* The more meaningful this means of expression are being selected, the more monumental must be the effect. Which radiates from the artwork because being binded to the senses we can dematerialize ourselves. For the applied art, specifically also for the building art, the transmitting sensory organ is the eye and the material subtract for the forming art will are the visible elements of space. Body design and as a necessary effect of it spatial boundaries are the real task of building art. Independent of the character of matter, the essence

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[long hand drawn line along this paragraph on the left margin] of the touchable impenetrability of the parts of the building are un-missable preconditions for the monumental body and space effect, and the resistance which comes out of the equivalent material to overcome. No building material is artistic or non artistic by nature, monumental or un-monumental. It is only because of its natural condition more or less predestined for monumental design. The resisting difficulties that the material character offers to the forming will are more or less strong, but each material ultimately finds its master.
The modern building materials such as iron and glass appear in their unveiling bodylesness with the desire for corporeality in architecture cannot be unified. Hence it should be much more interesting to prove through examples (what shall happen later) how nevertheless the artistic will also here the almost impossible difficulties gets all the difficulties out of the way with genius cleverness, with which it derives the impression of body out of characterless material. With the artistic perplexity which the use of iron in building art necessarily brought with it was it understandable that the reawakening sense for beauty of our time despite all demands of plastic creation made the mistake the naked iron construction skeleton of the engineer, that seemed unavoidable, to elevate to a new art principle.

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From now on the terms technology and art were brought together and the laws of materials and construction identified with those of the art. Such a conclusion seems justified because with the classical examples the accordance of technical form with art form, the calculable stability with the representational could be proved. This accordance remains certainly the

~~most~~ ideal aim for each work of building art, but only an immense effort of will, can bring into harmonious congruence the different laws of technology and art. The recent arithmetic calculation of stability of a material stands strictly separated next to the instinctual geometric harmony of the building parts, construction form next to art form. The correctness of the statement can be proven clearly as soon as one compares various materials of different stability in their technical and aesthetic function. A wide girder truss (hollow truss) carried by two thin steel beams is sufficient for the calculated stiffness but the aesthetic and feeling eye will be offended by the disproportion between the carrying and the carried elements because the ~~stability~~ stable character of the material is invisible, harmonious regularity is only graspable for the sensual view of the optical images made by surfaces (plains). An agreement in this predicament can only be thought of in mediation, in a balance between

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the calculation of the engineer and the architectural form. In a hand in hand of ~~thinking and feeling~~, of analytic insight and synthetic design out of the richness of possibilities that one must be looked for which in the same way does justice to the feeling artist and the knowing technician. But the artistic form-thought remains the higher commandment, to which technology in the variable adaptability has to willingly subsume. *[at the right margin he writes: to follow. Drawn line that breaks paragraph in two]* With this is not denied, that the rational construction and the properties of a material can become a valuable leading motif for an artist. *[hand drawn line that joins the two paragraphs]* In contrast every good epoch of building art had ~~welcomed~~ enjoyed receiving the achievements of technology and exploited artistically. However, for our time the task of the building master seems very hard, to make again bodies and spaces out of the bodiless iron skeleton flooded through with light, without ~~essential~~ disruption of technology, the functional use and the pecuniary economy. *[hand drawn line breaking paragraph]* A purely constructed iron bridge, the naked result of reasoned engineers calculation is in many cases a fleshless bodiless line-structure without light and shadow. The power of tensions is therein quasi graphically expressed to our intellect, but our sensual feeling thereby remains empty. ~~But~~ If one ~~would like~~ ~~wanted~~ the construction of such a bridge conceal with wood or sheet metal then the statistically mathematical calculation would not be changed in essence,

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[hand drawn vertical line along this paragraph at the right hand side of the page] but, the optical image because now the eye would be offered the illusion of a powerful corporeality which it had missed before. ~~One can observe, which~~ which strong role the illusion of corporeality

plays in the sensual feeling, when for instance one hangs in front of the open railing of a highly located balcony opaque paper or canvas. The vertigo is despite the meaninglessness of this change will be immediately appeased. The eye finds support, and at the same time is conveyed to the other sensual feeling of spatial comfort. The ~~natural~~ born feeling is not going to be eradicated by intellectual insight. With the same optical illusion the applied arts had always to calculate. ~~Every painting awakens the illusion of the plastic~~, every building ~~makes~~ avoids in its corporeal design the practical space demands, by trying to awake the apparent impression of the touchable impenetrability of corporeal mass. *[undecipherable handwritten comment on the left side of the page]*
But corporeality consists of any kind of material elements, and no material, whatever its characteristics may be, will be in the position, to demolish the basic laws of building art. The technology must self-evidently go its own way unobstructed, and should the biggest utopia of the engineer, the production of transparent iron, be fulfilled, the architect would have to find means and ways, body and

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spaces to create out of it, in order to create works of art. In every material lay artistic possibilities. With injustice one first perceived the modern products, such as rubber linoleum paper, concrete as less valuable surrogates of other materials. One did not only not understand them and gave ~~pointed~~ them in wrong ~~direction~~ application. Therefore it is a great achievement of the latest epoch, that it helped again to justice he building materials and its constructive functions and thereby created a healthy material base for a new artistic form unfolding; because technical abilities put the artist in the position, to play sovereignly with all constraining difficulties. Obviously pure ability is not enough; equally the architect alone creates through skilful arrangement of the materials works of arts, like the musician through the instrumentation, through the ordering of the sound colours of his instruments. Only the big idea of the genius which saturates every exterior with spiritual expression brings the correct balance of tensions in the big complex of artistic and practical requirements in the work of art, so that also every one-sided standpoint of an observer finds its satisfaction.

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The artistic genius is always ~~in advance of the~~ wants the representations of the biggest thought of its time. <u>In our today's life is expressed everywhere the higher ideas of the world economic aligned modern work</u> ~~are everywhere~~. Instead of individual craft-based single work, industrial organisation, centralisation and division of labour comes into operation. From the revolution that this turnover brought with it, swells a new spirit of order. It starts a

great widely extending contemporary life ~~that had begun and fulfils~~ that fulfils all natural life expressions with its new rhythm. Problems of economical and ethical nature are awaiting their solution. The social question has become the actual ethical central point of our days. The big problem for the general public to which art has to turn towards to, because the world of a new religiosity that engages everyone and could become the guideline for a new art is not yet spoken. Art however needs faith and great common ideas that big things can come about. In order to feel a deep impression of a building one has to believe into the idea that let it rise. In front of Saint Peter in Rome today we almost can't anymore feel the enormous impression like the faithful roman in the renaissance. The art of past decades probably lays bare on these grounds because it misses the moral collection point the cultural ideal of general meaning

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which generates the necessary enthusiasm for the art. Today we have signs that the great technical and scientific epoch will be followed by a time of internalization, the civilization a culture. After a strong satisfaction of the intellect currently the rudimental drive for design stirs again apparently of which, that has been recognised. The ideas of the time push towards an architectonic expression; the monumental work needs containers, which with serious pathos can worthily characterise the inner value of the facilities. Palaces need to be erected for work, which the factory worker, the slave of modern industrial work, not only give light, air, and hygiene but also let him sense something of the dignity of the common great idea, which carries the whole thing. Only then can the individual subordinate personal under impersonal thoughts, without loosing the joy in the co-creation of great common values, which earlier have been inaccessible for the sphere of control of the individual ~~the individual could not have achieved~~. The consciousness, awaken in the individual worker, could maybe ~~hinder~~ avoid a social catastrophe, which threatens daily with the fermentation of today's economic life. Farsighted ~~clever~~ organisers have already realised, that with the satisfaction of the individual worker but also the work spirit grows and in consequence the productivity of the company. The subtle calculating master of the factory will make use of all means,

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which will vitalise the deadening monotony of factory work and that could appease the restraint of work. That means he will not only care for light, air and hygiene, but will also take due consideration in the design of ~~its~~ his workshops and spaces of the primary feeling for beauty which ~~even~~ also the most uneducated worker has.

Pages 14-18 appear translated in Hartmut Probst and Christian Schädlich, *Walter Gropius* (Berlin: Verlag für Bauwesen, 1985–1987).

P. 18 (first page where images appear)

1. Fortress Coca in north of Spain, ~~a medieval profane functional building.~~ All forms are provenly derived from needs of war technology. Out of those requirements the observer draws its artistic consequences and under abandonment of all ornament and motif through the modest means of rhythmic nature arrived at a powerful effect.
2. The reason for all the following examples of modern industrial and engineer building is to find out, in as much the corporeality or in interior views of the space enclosure is meaningfully expressed.
   At the beginning I like to show some bridges, even though they are not part of the industrial buildings in the closest sense.

3. Iron beam-bridge of conventional construction near Griethausen aum Rhein.
   On the right side a part of the iron works is covered up in order to indicate how much stronger the architectonic expression would be if the builder would have used a simple cladding over the girder truss.

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Instead of the network of numberless steal beams through which the eye can see through, would be aesthetically speaking, the impression of a simple corporeal beam created and at the same time the eye of the passenger would be allowed a spatial stop/rest/hold. The surprising view out of a window of this wall, which has not existed before, could now become an important architectonic means of expression. This can only be a purely schematic indication.

4. The design of a bridge in Kassel by Theodor Fischer. Here is made the attempt in the praxis of the artist through the concealing of the construction to get a corporeal effect with light and shadow.

5. The iron Virendel bridge in Holland (Canal in Beeringen). Here obviously already the engineer felt the need to collect the confusing thin iron beams and

to make thicker bands out of it, the labyrinth of the calculated tension and pressure forces is not expressed. They are invisibly playing in the inner of the plate girder because the tension in the centre of the bridge is naturally bigger than at the ends.

6. Street bridge in Richmond, (America) in ferroconcrete. For the eye, a sympathetic corporeal effect, a framing of the view through. Of the static functions of the invisible embedded iron beams and of the counter effect of the interpenetrating materials. Nothing can aesthetically be brought to representation. The satisfaction of stability which the perception requires is achieved by much simpler means. The eye only sees the stable beam that is being placed above the opening, not the complicated forces of tension in the inside.

7. An Italian train bridge in ferroconcrete. The construction is in principle the same as in the previously shown in the Dutch Virendel bridge.

8. Ferroconrete in Peru. The bridge has little mass, but nevertheless has a very corporeal effect through the heavy shadow of the overlaying plaque, broken through iron grid bridge. The architectonic main means of expression, light and shadow, necessarily are not available because they are connected to corporeality.

9. Ferroconcrete bridge in Ulm by Professor Bonnatz.

10. Nun bridge in Bamberg by the company Dyckerhoff & Widmann. Completely closed corporeal effect also the railing is unbroken through. Remarkable is also the simple ornamental frieze which is ~~inscribe~~ exposed into the concrete surface.

11. Britannia bridge in South England (Wales) The pillars are out of stone and amongst themselves connected with ferroconcrete beams.

12. A French torpedo experimental ponton in Ferroconcrete.

Due to the consequence of the requirement of enclosed corporeality for the external impression of a building, the isolated interior space demands for even not torn wall surfaces. In fact one can, in the newest construction, thanks to the conscious collaboration of an artist or the unconscious correct feeling of an engineer, see the attempt to collect the iron in enclosed beams instead of the confusing dissolved iron beams of the previous spider web like roof beams.

The naked iron puts

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naturally the greatest resistance against the artistic demand for enclosedness than the ferroconcrete that is so much used in recent time.

Now, some interior spaces in ferroconcrete construction.

13. Cement silo by the firm Wyss & Freytag

14. Mechanical workshop of the same company. The thin tension cables are playing no aesthetic role in contrast to the thick and enclosedness of the ceiling vaults. Despite the plenty of light a clear and even flush closure of space is achieved.

15. Deposit of a sulphur refinery in Marseille

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16. A storage space of a chemical factory in Posen by Poelzig in Breslau. The curve embraces the natural land, which is of advantage for the inner impression.

17. Concrete vault of a water container in Dresden from Gerstenberger & Döhler

Now some constructions in iron:

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18. A zeppelin airship hall. This construction represents a transition to the enclosed iron girder. Already for practical reasons the tension cables had to disappear because the zeppelin uses the whole of the inner height.

19. Train station in Homburg v.d.H. with completely enclosed ceiling girders and pillars.

20. Machine hall of the world exhibition in Brussels by peter Behrens. Also a solution of completely enclosed plate girder

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21. German train hall at the world exhibition in Brussels by Peter Behrens in wood construction. The volumetric material positively influences the desired encolsedness.

22. The same hall from outside

23. Engineer's hall at the world exhibition in Brussels also by Behrens. The roof was also constructed in wood and completely covered in glass. The interior is understood like a courtyard that is enclosed by the strong roof girder. Through the tent ceiling the daylight enters the space diffusely. The roof is therefore aesthetically ignored.

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24. Now some airship halls from outside. Zepellin hall by Bruno Möhring

25. Airship hall completely constructed in wood

26. Zeppelin reserve hall. Despite being constructed out of fabric, the effect is very impressive because of its compact corporeality. ~~For light and shadow effects the materiality is indifferent.~~

Now follows a series of modern Germany factory complexes.

27. Machine factory in Heilbron from Beutinger & Steiner

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28. Turbine house from Harkort in Wetter a/Ruhr from Architect Taut

29. The ferroconcrete skeleton for a silo in Teltow. The good strict and objective base form had been destroyed again through belated added steel architecture.

30. The character of the building is now rather that of a housing than of a silo.

31. A more consequent façade solution for a ~~single~~ similar ferroconcrete skeleton would be this. One factory building for Singer Comp. by Wayss & Freitag

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32. Eurlersche Paper factory in Bengheim von Metzendorf. Single things like the tower are experienced as stylistic prejudice

33. Power station in Bad Nauheim by the duke's building official

34. Xx

35. A blanket factory of unknown origin to me

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36. Building shed of the society for over and underground trains in Berlin. All details also of purely practical determination like gutters and rainwater pipes are also architectonically solved well and not given to the arbitrariness of the craftsman

37. Xx

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38. Gas factory ~~of Borsig~~ in Tegel. One can see that also with the architectonically often so rejected chimney a fantastic monumental effect can be achieved as soon as many are arranged in continuously running rhythm.

39. Unfinished watertower in Posen by Poelzig in Breslau

40. A detail of it that allows seeing the construction in iron skeleton framework. The bricks are put together in alternating patterns and shell remains unplaster.

41. Chemical factory in Posen, new building of Poelzig in Breslau.

42. Also from practical – economic standpoint – very remarkable. Equal window sizes

P. 30

43. are being executed. The small windows are all one sq meter big, a measure that equates the construction of the 'Prussian' walls. Excellent is the treatment of the roofing felt through folding at the edge a water gutter is created and at the same time the roof gets a white finishing element instead of the otherwise ugly paper thin gutter

44.

45. Werder Mill in Breslau by Poelzig & Brischwitz which unfortunately is not executed. | ! 1 Bild | *[Here the images to which he refers are pencil drawn on the paper – no photographic thumbnail]* Despite the dematerializing character of iron and glass is in the fitting of the center through the flush arrangement of the materials in one plane a complete enclosed corporeal effect created.

46. Xx

P.31

47. (no image Meine Fabrik) Design for an American show lace factory close to Hannover. An own attempt.

48. Equivalent workers houses for that with cheapest means. From Walter Gropius. Janikow in Pommern.

49. Xx

50. Xx

51. Xx

52. Xx

53. Xx

P.32

54. New close up of the high voltage factory from the AEG in Berlin by Peter Behrens which probably is known as exemplary

55. A new still in construction factory of the same building complex by Peter Behrens.

56. Design for the arrangement of a gas works in Frankfurt a/M. also by Peter Behrens.

57. Design for a large office building of the Mannesman Works in Düsseldorf. By Peter Behrens.

P.33

58. (his drawing that could be from photograph below) Factory building of the Bremer Coffee A.G. A generous plant by Wagner in Bremen completely executed in ferroconcrete.

58a.

59. (one image of AEG without number above) A.E.G. Turbine Factory by Peter Behrens. So far this building is probably the only example for, that an artistic will in a sovereign way completely mastered modern engineering construction and modern building materials (iron and glass), and scoffing the essential characteristic of these materials, creating a monumental building work in the best sense. This Hall Scheffler could with good right term a cathedral of work.

60.

(II Bild) The effect is surprisingly simple and self evident, the expression is found with the barest means, the huge roof appears like a monolith, which on the longitudinal side is carried by iron pillars at the front by the glass wall. Again through the flush arrangement of glass and iron the corporeality of this building element is created, so that the eye is not offended by it even though in truth, only the thinner glass frames aesthetically are being assigned the carrying of the heavy mass of the roof. The other inclined glass and concrete planes are already identified as non-carrying filling elements through the horizontal emphasis.

At the end again a few silo buildings from Germany and America:

61. Corn silo of the Rolands Mill in Bremen by Hilderbrandt & Günthel. The ratio of height to width seems a little unfortunate. The drums are here out of sheet metal, at the later examples out of concrete or brick. It is to be alluded to this here because also here the material for the big monumental main form and the artistic rhythm ~~is indifferent~~ contributes a few.

62. Corn silo in Worms in ferroconrete by the Firm Wayss & Freytag

63. Hard stone silo on Oberramstadt in ferroconcrete by the same company.

64. Gigantic silo and elevator of the Baltimore and Ohio railway association in Baltimore. Architect Long. Completely constructed in ferroconcrete

65. Dakota elevator in Buffalo. The middle building is produced through the vaulted sheet metal plates between iron girders. The thickness of the wall is therefore minimal nevertheless a powerful corporeal effect is reached.

66. Corn silo of the Washburn Crosby association in the middle district of Minneapolis, North America, out of ferroconcrete.

67. Corn silo of the same association in Buffalo.

68. Korn silo in South America (see layout)

69. Corn silo in Buenos Aires. Completely in unfinished brick construction. Apparently an artist has contributed.

The performed series of images makes no claim for completeness, but maybe with it nevertheless the evidence is provided, that a factory building not always has to be a necessary evil, but can become the mirror image for the best forces of our time. Though a place of work will never awaken in us such a strong mental impression like a house of god, because there can only human not divine processes ~~are~~ be glorified, but in the buildings of today's industry could lay hidden the seed for higher architectural thoughts, which brings it closer already today to the sphere of monumental art. Our time is filled with problems,

in whose broad and free expression our spiritual future is going to lie, and we already are starting to sense, that out of today's world view a higher culture can blossom; but then could also out of the <u>forms of expression</u> of our time the spacious ethos of a new sacred style be born, which in the formal mastery of cubic masses again recognizes the path to set characteristic monuments/memorials to the holiest thought of mankind.

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Box 2: Concrete Atlantis: Written manuscripts

Box 3: Concrete Atlantis: Photographs

B3, F1 – Photo lists and photocopies, B3, F2 – Concrete Atlantis: Photographs (figs 1-121), B3, F3 – Concrete Atlantis: Photographs (figs 3-20) all modern black and white prints 20 cm x 25 cm. Patricia Layman Bazelon 1986 stamp in their backs with reference number. B3, F4 – Concrete Atlantis Photographs (figs 21-60) B3, F5 – Concrete Atlantis: Photographs (figs 61-78). B3, F6 – Concrete Atlantis: Photographs (figs 81-100). B3, F7 – Concrete Atlantis: Photographs (figs 104-128)

Box 4 – Concrete Atlantis: Other photographs and illustrations

B4, F1 – Concrete Atlantis: Other photos (illustrations), B4, F2 – Concrete Atlantis: Photographs (Kellog), B4, F3 – Concrete Atlantis: Photographs, B4, F4 – Concrete Atlantis: Photographs, B4, F5 – Concrete Atlantis: Photographs, B4, F6 Concrete Atlantis: Illustrations for publication, undated, B4, F7 – Concrete Atlantis: Printed materials, 1953-1973 (copied articles, no annotations), B4, F8 – Concrete Atlantis: Printed Materials, 1981-1984, B4, F9 – Concrete Atlantis: HAER inventory, 1907-1919

Box 5 – Concrete Atlantis: Research materials

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Box 10 – Articles and Reviews
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Box 12 – Reyner Banham – lectures and conferences
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