TOWARDS A (NEW) OBJECTIVITY: PHOTOGRAPHY IN GERMAN ARCHITECTURAL DISCOURSE 1900-1914

Jasmine Benyamin

A DISSERTATION
PRESENTED TO THE FACULTY OF PRINCETON UNIVERSITY
IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

RECOMMENDED FOR ACCEPTANCE
BY THE SCHOOL OF ARCHITECTURE
Advisor: Professor M. Christine Boyer

JUNE 2015
Abstract

At the turn of the twentieth century, the wedding of photography to architectural discourse in Germany was symptomatic of a larger fascination with the aesthetic potential of machine culture that had developed even before the turn of the century. The public deployment and exchange of ideas through polemical texts, propagandist journals and touring exhibitions by some founding architects of the German Werkbund exemplified the rhetorical union of the arts and architecture, which was facilitated in large part by the use of the photographic medium.

This dissertation focuses on the period following the birth of architectural photography in the latter part of the 19th century and the beginning of the First World War. Its disciplinary aspirations are to extend existing histories on architecture’s disciplinary engagements with photography, as well as to critique assessments of the Bauhaus as foundational to modernism’s aestheticization of architectural vision.

It is the aim of this study to address but one moment in the rich and widely contested relationship between architecture and photography. However, in doing so, it also speculates more generally on the ways in which the intersection of photography with architecture contributes to the fostering of cultural and discursive exchange. Such an examination of the circumstances and contexts in
which photographs intervene in the pre-history of architectural modernism is critical to any re-assessment of post-war architecture culture. As reality itself is an effect of representation, photographs likewise test the truth content of the objects they image. The immersion of photographs in architectural discourse between 1900-1914 revealed the ways in which theories about architecture were often constructed at the moment of their mass visibility.

Some of the problems encountered through the photographic mediation of architecture were not only introduced in the Wilhelmine era. They were widely anticipated, if not codified, as precursors to more well known case studies from the 1920’s, and certainly well in advance of our current predisposition to visual culture. Amidst this wider cross-temporal net, it is the intent of this research to challenge both photographs and the objects they depict with their discursive limits and formal contradictions in mind.
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Table of Contents</td>
</tr>
<tr>
<td>Acknowledgements</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>CHAPTER 1 “Architecture, Photography and the English Example”</td>
</tr>
<tr>
<td>CHAPTER 2 “Hermann Muthesius’ Materialist History: The English House and the Tectonics of Photography”</td>
</tr>
<tr>
<td>CHAPTER 4 “Image Control: Walter Gropius, the Fagus Factory, and Operative History”</td>
</tr>
<tr>
<td>CONCLUSION</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENTS

The journey to the end of this work has been a long one. I would like to thank the faculty at Princeton University for their help, advice and encouragement throughout the pre-dissertation and dissertation process, but mostly for their work and teaching that informed and inspired my own research. First of all, I owe a huge debt of gratitude to my advisor Christine Boyer for her steadfastness and encouragement throughout this circadian and circuitous journey. I would also like to thank my reader Jean-Louis Cohen for his long standing and generous support, my examiners Eduardo Cadava, Michael Jennings and Spyros Papapetros for agreeing to be there in the end after so many years, and all the faculty at the School of Architecture and the Department of Art and Archaeology - especially Esther de Costa Meyer and Hal Foster - who helped shape the framework of this study. I would also like to thank Director of Graduate Studies Beatriz Colomina and Dean Stan Allen for their assistance, as well as the whole staff of the School of Architecture for their invaluable help over the years.

This dissertation could not have been written without a generous grant from the DAAD, which made possible my research at various institutions in Germany between 2003 and 2004, but also in the summers of 2005, 2007 and
2009. At the Bauhuas Archive, my great thanks go to Annemarie Jaeggi and the entire staff of the library. Thanks too go to Eckhard Siepmann, Oliver Hollmeyer, and Renate Flagmeier at the Werkbund Archive for their endless patience with my at times obscure archival requests, Katja Leskau at the BildArchiv Foto Marburg, the staff at the Karl Ernst Osthaus Museum in Hagen for their invaluable assistance, and finally the administration at the HDK in Berlin, along with the tutelage of Andreas Haus. A research fellowship at the Canadian Centre for Architecture in 2005 allowed me unlimited access to a vast array of journals and nineteenth century photographic material that helped contextualize my research within larger developments in the photography of architecture.

Special thanks go to all the friends and colleagues whose support and intellectual camaraderie helped make the dissertation writing process seem less daunting. You know who you are, but my dear friends Nick Cheonis, Isabelle Gerard, Lisa Hepps, Thalassa Curtis, Susanne Schindler, Ernestina Osorio and Sarah Deyong deserve special mention. Subsequent to my tenure at Princeton, my years of teaching at the California College of the Arts, Texas A+M University and now at the University of Wisconsin-Milwaukee have provided me with the institutional support and backing without which this dissertation would have never, at long last, come to life. My mentors at these institutions have had a deep impact on my successful completion. The most pleasant surprise over the last
few years has been meeting and engaging with recent graduates and students of the PhD program at Princeton, whose encouragement and enthusiasm for my research has been unexpected but deeply appreciated. Some early versions of sections from chapters 3 and 5 were presented in the form of conference papers at the Society for Architectural Historians, the German Studies Association, and the European Architectural History Network. The feedback from these events has been enormously valuable. In addition, a segment of chapter 2 is under review for publication in the *Journal of Architecture*.

Lastly but most importantly, I am deeply grateful for the love and support of my immediate and extended family, for their unfailing positive reinforcement and dogged determination to be my biggest cheerleaders, even in the most trying of times. In particular, my father Ninos, mother Annette, and brother Daniel, who somehow always knew I could achieve this milestone even when I thought I could not. It is to them that this dissertation is dedicated.
For Ash
Introduction

Architecture remains a predominantly visual art; this may be regrettable but it is a historical and cultural fact, and it means that architects are educated and influenced primarily by the force of visual example. What were the most fundamental examples for (European modernists) is abundantly clear: seven pages of almost unexplained illustrations of American grain elevators and factories that appeared as an insert in the *Jahrbuch des Deutschen Werkbundes*...The photographs represented a truth as apparently objective and modern as that of the functional structures they portrayed.

Reyner Banham¹

What comes first, the image or the object? Which defines the other?

Architects more than any other viewers of photographically mediated buildings are aware of the difference between the image as suggestive surface and its referent as object, but nonetheless they are also most dependent on the representation of buildings. This conflict between the need to understand and develop tectonic forms while rationalizing and theorizing them through image-based arguments manifests itself most acutely within architectural discourse itself; the way it develops and sustains its arguments, maintains its valuations, and in some senses relies on these tensions to exist.

At the turn of the twentieth century, the wedding of photography to architectural discourse in Germany was symptomatic of a larger fascination with the aesthetic potential of machine culture. The entanglements between architecture and photography that persisted in this time reflect the centrality of some architects’ preoccupation with the aesthetic of industrial design – an aesthetic that can also be traced to the early history of the photographic medium. This almost instinctive engagement with a notion of functionalism- as rhetoric and image - was compounded by the impact of the discourse surrounding realism and objectivity that infused the architecture from this period.

Nonetheless, architects and photographers (the latter it could be said adopting the role of ‘paper’ architects) were also complicit in the construction of their arguments and images beyond the conventional attribution of most photographs qua documents, or as guarantors of the real. Further, the evolution of the medium as an affordable alternative to block printing contributed to the ubiquity of negative based illustrations in the emergent mass media. These developments and interests informed the literature devoted to domestic and industrial design, which in turn, laid claim to their status as constitutive of modern society. The public deployment and exchange of ideas through texts,

---

3 Ibid.
4 Ibid.
propagandist journals and touring exhibitions by some founding members of the
German Werkbund exemplified the discursive union of the arts, applied arts and
architecture, which was facilitated in large part by the strategic use of the
photographic medium. In particular, I examine the role of Hermann Muthesius,
Karl Ernest Osthaus, Walter Gropius and – retrospectively - Sigfried Giedion in
shaping the media history of this period through their polemics related to the
‘new’ in architecture.

**Aims of the Dissertation**

This work zooms in on the period following the birth of architectural
photography in the latter part of the 19th century through to the beginning of the
First World War. More specifically, the work in the early part of the dissertation
aims to enhance existing research related to the rich exchanges between
England and Germany regarding the photographic medium and the latter’s use in
architectural discourse. Later chapters assume a greater interpretive burden and
thus a larger theoretical framework, since they attempt to fill narrative gaps in the
story of architecture and photography at the turn of the century.

While the main thrust of the writing will not always be to engage
photography directly, photographs - as both ideas and objects - will be central to
the dissertation. I attempt to weave historical research with theoretical arguments
whose objective it will be to both enrich and supplement existing scholarship on so-called topographical photography in the nineteenth century, the subsequent splitting of historiographical and architectural photography, and to offer a critical re-assessment of the Bauhaus’ foundational role in shaping the discourse of modernism via media engagements between images and buildings. Further, I believe this work finds itself among a growing cadre of recent scholarship whose focus it is to delve more deeply into proto-modern architectural developments in relation to the photographic medium as a way to develop and further hone our understanding of its (modernism’s) origins. Ultimately, this dissertation evaluates the use of photographs by these figures not only in the context of the organization’s founding within the milieu of cultural politics in *Wilhelmine* Germany, but also as a precursor to later and formally more self-reflexive mediatic explorations of architecture at the Bauhaus Dessau and beyond.

By way of clarifying an interpretive framework, this dissertation attempts to answer the following questions: what role does photography play within the larger field of ideologies underpinning architectural modernism? How are values – aesthetic or otherwise – read, represented and translated? As part of a larger discursive space, how do published images intersect with written texts? How and in what ways does authorship play a role in crafting discourse? How is it

---

6 I am thinking in particular of work undertaken by Laurent Stalder, Lauren Kogod, John Mascuica, and Sabine Röder among others.
identified and telegraphed? As questions of individual authors, (including but not limited to photographers, architects, writers, editors, etc.) are suppressed by a collective author, (through the designation of a movement like the Werkbund or the Deutsches Museum), architectural meaning is deprived of a more nuanced reading. Otherwise put, if the working of media such as photography and architecture operates within a larger metonymic structure, how does the interchangeability of objects, images and words obscure the operative status of each? When and how do photographs of buildings come to substitute buildings themselves? The subsuming of one material condition (flat and one dimensional surface) in another (volumetric and tectonic) becomes a common feature of these kinds of translations.

The late historian Robin Evans specialized in translations. As a thinker devoted to the subject of architectural media, specifically drawing, he excelled at scholarship on translations and advocated their proliferation in the discipline. Evans contended that the act of translation was a necessary function of the analytical process in both design and criticism. This migration from ideas to objects, drawings to buildings and buildings to words was productive precisely for the gaps it created, because it was in these resultant “zones of instability,” that the discipline was forced to reckon with the means and limits of its own making. Translations exasperated the fluidity of meaning.
He viewed this slippery slope as emancipatory, when reality could be trumped by the desire for an “enabling fiction.”

Walter Benjamin’s views on literary translation decades earlier presaged Evans’ insights. Translations for Benjamin were about both destruction and survival. They were “forms” that required something to precede them, and whose task (Aufgabe) it was to uncover the “afterlife” embedded in earlier forms. In “good” translations, this afterlife as material trace persisted in its new iteration. Further, for Benjamin, translations allowed the original to continually “renew” and “unfold.” Residual as translation, then, defined a force propelled by intrinsic and dynamic “echoes.” This force was a messy one; it would always be at loose ends, uncover weakness and contingencies. Central to Benjamin’s notion of “task” then, was the loss of control. It followed that the best translations reflected a willingness and determination to let go of referents and to strive for autonomy.

Following Banham, Evans and Benjamin’s lead, translation is a central trope of this dissertation: it is a way to address how images of architecture were circulated and in which discursive contexts. Within the realm of history/theory/criticism, I begin to engage concepts central to the theme of

9 Ibid.
translation-as-circulation in architecture and its relationship to media: how images are trafficked and consumed is directly related to the instability of their meanings within the discourse of architecture. I use ‘trafficking’ here not in its contemporary sense, but as a metaphor for the dealing and trading of images and their resultant commodification, their movement from the plane of the printed page to the more ambiguous spatio/temporal realm of discourse. Translations from history and theory to practice also provoke questions about material and ideological residuals: which theoretical ideas or historical assertions are left over or left behind in this moment? Which are modified then re-transmitted?

As is the case with many of the protagonists of this dissertation, this study advocates a notion of ‘active’ reading, which I define as an engagement with, and negotiation of objects, ideas, and their visual manifestations. In this context, what is at stake is not the formal reading of the buildings themselves, but rather the ways in which their images are absorbed and integrated into a larger discourse of architecture.

More concretely, one of the central missions of this dissertation is to carve out a critical space of inquiry within which the word ‘photography’ permeates architecture. The distinctions between “architectural photography” and “the photography of architecture” are neither semantic nor accidental. Indeed, by resisting the former, I wish to identify a new way of thinking about how the
photograph engages architecture and vice-versa, which ultimately has no more than a tangential connection to the profession or ‘art’ of architectural photography. Rather, I attempt to construct discursive linkages between photographic and architectural language. This is both an alternative history of photography and of architecture.

Indeed, the term “architectural photography” presumes a preconceived disciplinary or sub-disciplinary autonomy within the larger discourse on photography. The photography of architecture includes this subset, but also encompasses a more heterogeneous field of inquiry that examines those images that may have no particular aesthetic value in and of themselves, (i.e. as art objects) but rather function as part of a larger propagandist media matrix – disseminated and mobilized in multiple normative ways. The value of photographs in this study is determined by their particular deployment within a discursive setting, not outside of it.

The relationships between architects and photographers are also a central strand of this study. When operating within a collaborative mode, what roles do each play respectively? How are questions of authorship between the two negotiated? This dissertation addresses photography primarily in this context,
rather than as a distinct zone of inquiry. Is editorial control shared? Who has authority over whom? Both photography and architecture assert values relating to authorship and reception. What is the relationship between authorship and reception? What kinds of photographs are these - documentary, art, commercial, or a hybrid? Both aesthetic and propagandist values will be considered. How are values assigned in architecture and in photography, if at all? Can we speak of architecture outside the parameters of reception? Is there such a thing as architecture without a viewing audience?

Related questions to the above concerns are: when does the architectural value of photography end and its propagandist value begin? Do the values overlap? It could be argued that at the turn of century, photography – like architecture - had not yet reached the level of compositional or graphic sophistication to match the purported progressiveness of the rhetoric. Rather we could assert that in the case of the period in question, propagandist value almost always eclipsed architectural value. As Claire Zimmerman and others have argued, canonic images like those of the Barcelona Pavilion decades later illustrated how their propagandist value outlasted their architectural value, well after the Weimar era in which they were produced. Ibid, pg. 170.

10 On the proposition that collaboration weakens the notion of authorship, see Claire Zimmerman dissertation, p. 141.
11 As Claire Zimmerman and others have argued, canonic images like those of the Barcelona Pavilion decades later illustrated how their propagandist value outlasted their architectural value, well after the Weimar era in which they were produced. Ibid, pg. 170.
The photographs I examine functioned not as individual artifacts with their intrinsic attributes (aesthetic or otherwise), but rather were always presented in relation to a larger project: as part of an exhibition, book etc. These images were almost always meant for reproduction or represented within the larger discursive context. Put another way, the photographs in this dissertation circulated with the assumption of the architect as client and primary audience. They rarely meant to operate independent of editorial influence, but within it. Further, the question of authorship in this milieu became much more ambiguous to the point that in many cases it was a factor that was altogether removed from any interpretive function central to criticism. Even in those cases where individual photographers are known and discussed, these images cannot be adequately understood outside of the rich matrix of influence and ideology.

Contextualization

This research has relied on existing scholarship on the pre-Bauhaus roots of the Werkbund, as well as on the larger Anglo-German intellectual exchanges that marked the period. Werkbund era scholarship referenced for this study includes writings by Frederic Schwartz, Joan Campbell, Annemarie Jaeggi, Karen Wilhelm, Sebastian Müller, John Macuika, Matthew Jeffries and Mark Jarzombek – to name only a few. In addition, sources for scholarship on this
period in architecture have relied on Reyner Banham, Nikolaus Pevsner, Julius Posener, Winfried Nerdinger and more recently Jean-Louis Cohen.

Further, my particular stance on architecture’s relationship to photography acknowledges the centrality of Beatriz Colomina’s many writings on the subject of media and architecture. Recent contributions by Andreas Haus, Rolfe Sachsse, M. Christine Boyer, Sabine Röder, Michael Jennings and Claire Zimmerman among others have sought to expand the critical framework within which discussions of architectural modernism through the photographic medium take place. The writings of Carol Armstrong, Geoffrey Batchen, and Molly Nesbit have also been consulted in order to gain grounding in the work of 19th century pioneers in photography. Armstrong’s *Scenes in a Library* and Nesbit’s *Atget’s Seven Albums*, but particularly Eduardo Cadava’s *Words of Light*, have also inspired a particular writer’s voice to which I am indebted.

The historiography pertaining to the intersection between the two disciplines prior to 1945 has been episodic in nature. The critical focus of scholarship on the role of photographic media in architectural discourse has centered on the formal innovations and developments that occurred during the Weimar period. I intend to show that the earlier period of cultural engagement between *Wilhelmine* architects, photographers, clients, and editors sowed the seeds for many of the tropes - and traps - of high modernism: architects as the
denizens of taste training in style and form, the seeming ease of reconciling art practice with, rather than in spite of, technological advancements, the overly simplistic connections between architectural and societal advancement and the teleological penchant for a determinist yet apolitical ideology emerge from this understudied period of media history. Indeed, many of the figures evaluated in this dissertation, namely Hermann Muthesius, Karl Ernst Osthaus and the young Walter Gropius, were witness to and participants in the manufacturing and dissemination of their architectural messages wherein photography - as both medium and message - became institutionalized.

I also address the dialectic relationship between aesthetics and the marketplace. Wilhelmine architects and Werkbund co-founders juggled multiple roles as pedagogues, editors, patrons and publicists. Their evolution as tastemakers was both a function and symptom of the transformative power of mechanical reproducibility. The ways in which these figures engaged photography as simultaneously sign and signifier, as discreet object and as part of a larger relay of production and reproduction were not new to the Weimar period. Rather, they were introduced in the Wilhelmine and only codified between the wars.

More importantly, it is Reyner Banham’s writings to which this dissertation is most indebted. Amid his significant contributions on the historiography of the

In the introduction to *A Concrete Atlantis*, Banham argued for the causal and cultural connections between architectural modernism in Europe and American industrial architecture of the turn of the century.¹² He questioned the rhetoric of modernist buildings that resembled architecture:

(Both) were honest expressions of the functional needs of their users or inhabitants…The appearance of industrial resemblances in nonindustrial buildings was construed, rather as a promise that these buildings would be as functionally honest, structurally economical, and above all, as up-to-the minute as any of the American factories that Le Corbusier hailed…¹³

I strive to expand upon Banham’s remarks in this context by analyzing the discursive and visual gaps – the fictions and the truths – that this period of architectural discourse produced. Banham credited the images in the Werkbund yearbooks as foundational. (FIGURE ii) Walter Gropius and Karl Osthaus mined sources from North and South America, without visiting them until the 1920’s. Banham went on to trace the voyage of these images from their as yet unknown

¹³ Ibid., p. 9.
sources, to Gropius, (who actually used the images the year before their appearance in the Werkbund Yearbook), (FIGURE iii) to le Corbusier (FIGURE iv) to Wilhelm Worringer, whose comparison between the factories and ancient Egyptian architecture had already been made by Gropius (FIGURE v), the effects of which appeared in numerous articles through the teens and twenties. But, again, while this realization inspired Banham to further explore the American structures in person (an act of inquiry that few of his modernist predecessors attempted), he used the yearbook images as a point of departure for his investigations into turn-of-the century American industrial buildings, not to evaluate how the photographs were used within the context of pre World War One German architectural discourse.

A lengthy paragraph that opens chapter 6 of Theory and Design in the First Machine Age figures prominently at the end of the dissertation. I use Banham’s remarks regarding “the accidents of photography”14 to make further linkages between the use of photographs in the Wilhelmine period to broader issues related to teleological accounts of modern architecture by a subset of so-called ‘operative’ historians.

---

Division of Chapters

Chapter one, “Architecture, Photography and the English Example,” examines the foundational role English developments in photography had on subsequent uses of the medium in turn of the century Germany, particularly within the context of architectural representation. I evaluate developments in halftone printing within the context of a burgeoning mass of illustrated magazines and journals. Further, I argue that technological advancements in printing aided in the dissemination of architectural images and in subsequent tensions regarding authorship. These developments were compounded by the inherent challenges of the still nascent professionalization of architectural photography.

Chapter two of the dissertation, “Hermann Muthesius’ Materialist History: The English House and the Tectonics of Photography,” examines that architect’s use of photographs in his early publications, which were devoted to extending the virtues of the English Arts and Crafts to the German market, and in particular his depiction of the English domestic movement. The architect’s long and fruitful engagements with photography began during his years as cultural attaché to the Wilhelmine government, but as the first chapter outlines, photography had already established itself as a medium with which to contend by the time of Muthesius’ arrival in England.
While the English House (1904-05) remains his best-known and most-cited work, Muthesius’ reliance on photographic imagery for the discursive impact of his study has been largely overlooked. I discuss the work of Birmingham photographer Thomas Lewis in greater detail, alongside the contributions by London based Bedford Lemere and Company; both were crucial in producing the images deployed by Muthesius. The latter's publications from this period constitute some of the earliest examples of a systematic and polemical use of photographs by any architect of the time, and they signal not only the shift in how photographs were being appropriated for publication, but specifically in the case of Muthesius’ later Werkbund rhetoric, how Sachlichkeit could designate both tectonic and visual principles. In fact, I argue that Muthesius’ concerns for high quality design imbued with a sense of ‘purposefulness’ were in keeping with his demands for clarity and integrity in the use of photographs to propel these claims, and that the ultimate aim of both was to create a framework for so called ‘taste making.’

However, I also contend that Muthesius did not develop his keen publicist eye in isolation. As is evidenced by the numerous correspondence files in the Werkbund archive, Muthesius’ relationships with photographers, book editors, clients, users and readers became more nuanced. Further, Muthesius’ reliance on his photographers for source material previously unknown to him also calls
into question the ultimate level of control he held with respect to the content of his books. There is evidence that even in the case of the English House, for which Muthesius’ expertise has been held in high esteem, many examples from which he drew his arguments were suggested to him by photographers eager to propel their work in the public realm. As such, the author’s stance vis-à-vis his subjects was also mediated.

Amidst an environment of increasing competition over the access and dissemination of images, Muthesius insisted on previously unpublished projects when possible, and otherwise for ‘new views’ not found elsewhere. Muthesius’ choice of mechanically derived photographs over more traditional modes of illustration reflected the growing trend on the part of editors and publishers for modes of representation that were driven more by purportedly factual considerations than stylistic concerns. The choice of photography also helped consolidate his overarching aim to centralize context, utility, and tectonic clarity in his written and visual arguments. Within this framework, I evaluate Muthesius’ larger rhetorical agenda regarding Sachlichkeit – a word whose rich lineage in German-language architectural discourse accounts for its multiple and ultimately unsatisfactory translations in English.

Upon his return to Germany, Muthesius’ writings reflected his shift in attention to the mandates of the newly founded Werkbund. He continued to
promote an indigenous design asceticism and advocated common sense applications of artistic practice into everyday life. The manner in which Muthesius deployed photographs in his writings mirrored his advocacy of a normatively formal architecture.

Chapter three, entitled “The Image and the Archive: the Werkbund, Deutsches Museum, and the Migratory Image,” resumes with Hermann Muthesius, his role in the founding of the Werkbund, the concurrent founding of the Deutsches Museum für Kunst in Handel und Gewerbe (German Museum for Art in Trade and Commerce) headed by Karl Ernst Osthaus and sanctioned by the Werkbund in 1909, and its’ vast collection of photographs (over 30,000 images) through the collaboration with Berlin based Franz Stoedtner, which in turn were disseminated widely. In addition to soliciting members from around the country to submit examples of good ‘modern’ buildings, the museum established a cooperation with Stoedtner to create a specific archival arm of the museum known as the Photography and Slide Center (die Fotografien-und-Diapositivzentrale). Along with their staged exhibitions, the Werkbund’s yearbooks provided a platform for the members to project an image of unity. ‘Typical’ examples of ‘good form’ encompassed all scales of production, whereby photographs of buildings designed by Werkbund members were placed
alongside domestic appliances, lighting and furniture, textiles, storefront displays, and even toys.

As in Muthesius’ earlier writings, I view the relationship between text and image on the one hand, in light of an overarching discursive interest in the books to achieve a notion of Gesamtkunstwerk. On the other hand, the real effect of the loosely connected essays and illustrations opened the possibility of wide and changing interpretations on the part of contemporary readers, and also allowed for their subsequent alteration and diffusion by other architects and editors.

Years later, Le Corbusier’s lifting and re-presentation of Gropius’ 1913 images in Vers une Architecture is but one example of this characteristically modernist penchant.

In contrast to the yearbooks, trade and engineering journals incorporated seemingly stricter rules by which text and image had to adhere, and as a result, a clear editorial message was conveyed to the readers regarding the value of what Paul Schultze-Naumburg and others referred to at the turn of the century as ‘the culture of the visible’ (die Kultur des Sichtbaren). In this and other contexts,

---

15 In his multi-volume study entitled Kulturarbeiten, published sequentially beginning in 1901, topics of study ranged in scale from the individual building to the city. Schultze-Naumburg organized photographs (2,500 in all) typically one to a page, utilizing in many cases the ‘example’ and ‘counter-example’ (Beispiel und Gegenbeispiel) technique in which opposing images were placed on facing pages (FIGURE vi), a tactic frequently implemented by numerous Werkbund architects and editors, but not by the subjects of this study. In Shultze-Naumburg’s case, photography was tacitly deployed not to enable the reader to discern between modern and un-modern, but rather to describe the
members were asked to submit images that best suited the task of photography itself: to intervene in the process of historical change while furthering domestic cultural interests. Photographs of all scales were integrated into a variety of essays covering topics as diverse as the development of garden cities to the role of painters in the applied arts movement.

This chapter also explores Walter Gropius’ early participation as a young member of the Deutsches Museum, and particularly his role in coordinating and developing its photographic collection. This archive embedded within the museum’s vast and disparate collection absorbed the holdings of the Werkbund’s own short-lived press bureau, and in so doing, became a multi stranded marketing center for both architects and the general public. At once a pedagogical resource and interface with the consumer, it provided images for exhibits and lectures while also offering prints for sale.

Two exhibitions that took advantage of the resources of the center are also topics of special consideration in this chapter. The first, entitled Moderne Baukunst ("Modern Building-Art"), was installed throughout Europe and the United States between 1910-1914 as part of larger showcase of German applied physiognomy of the German homeland in both its ‘good’ and ‘bad’ senses. Paul Schultze-Naumburg, Kulturarbeiten Heft I, (Munich: Kunstwart, 1901), unpaginated forward. Detlef Mertins explains that while Schultze-Naumburg, like his contemporary Hermann Muthesius, espoused a ‘sachliche’ simplicity of building forms, the former could not free himself from the historicist language of neo-classicism. See, Detlef Mertins, introduction to the English edition of the Walter Curt Behrendt, The Victory of the New Building Style, (Los Angeles: Getty Research Institute, 2000), pp. 35, 58-59.
arts. In addition to examples from what the museum termed its’ “advertising art”
collection, the images from this show proved to be the most viewed in the history
of the museum. Another exhibition coordinated by Gropius entitled
Industriebauten ("Industrial Building" - also known as the “Touring Exhibition
Eighteen”) was staged throughout Germany between 1911 and 1912. In this
context, the photographs formed a subset of the larger collection of the
museum’s examples of current architecture, and were chosen by Gropius in
consultation with Osthaus.

I evaluate photographs from both exhibitions within the contexts of the
differing interests of the organizers, and in the ways in which they interacted with
the market to varying degrees. I argue that they become leitmotifs for at once a
new cultural movement that showcased objects of applied arts alongside images
of architecture, and provided the public both in Germany and abroad with much
needed “taste training” (Geschmackserziehung), by promoting privileged models
for new formal solutions to aesthetic concerns.

Finally, chapter four entitled “Image Control: Walter Gropius, the Fagus
Factory, and Operative History,” evaluates pre-and post-war images of Walter
Gropius’ Fagus factory in tandem, thereby revealing the influence of later post-
Bauhaus attitudes toward photographic media in re-visioning Wilhelmine
architectural production. I describe how the project transformed literally before
our eyes, into a fitting prelude to Gropius’ campus designs in Dessau, and in turn became a canon of modern architecture in spite of its’ more complicated and heterogeneous provenance.

This chapter also explores Walter Gropius’ role in contributing to operative histories of modernist discourse. As outlined by Manfredo Tafuri,\(^\text{16}\) operative criticism – the tradition of historical research represented by historians such as Nikolaus Pevsner and Sigfried Giedion – self-reflexively consolidated the history leading up to the modern movement as a way to argue for its seamless connections to the pre-modernist period. Such a merger required a historical reading akin to the act of montage: a highly activist editorial process that presents opposing moments in space/time as a seemingly unbroken narrative in order to compel the strongest reaction.

In relation to the Fagus, the photographic dissemination of the project, arguably more than any other of the period, illustrates the degree to which Gropius and Giedion’s editorial ‘operations’ shaped the building’s historical legacy. To this end, I analyze photographs of the building taken from the period of its construction by Edmund Lill alongside later Weimar images taken by Albert Renger-Patzsch. Whereas Lill’s photographs initially appeared in the yearbooks of the Werkbund, in the manufacturer’s advertising material, and in engineering

journals, Renger-Patzsch’s *Neue Sachlichkeit* images were privileged in Giedion’s *Space Time and Architecture*, Walter Gropius: Work and Teamwork, and most subsequent historical scholarship. By reading these early and later representations of the Fagus factory in tandem, I elucidate the influence of later Bauhaus attitudes toward photographic media in re-framing Wilhelmine architectural production.

To conclude, it is the aim of this dissertation to address but one moment in the rich and widely contested relationship between architecture and photography. However, in doing so, it also speculates more generally on the ways in which the intersection of photography with architecture contributes to the fostering of cultural and discursive exchange. Such an examination of the circumstances and contexts in which photographs intervened in the pre-history of architectural modernism is critical to any re-assessment of post-war architecture culture.
Fig. ii Factories as they appear in the Werkbund Yearbook of 1912. (BHA)
Fig. iii Factories as they appear in Walter Gropius’ unpublished lecture notes, “Monumentale Kunst und Industriebau,” 1911. (BHA)
Fig.iv Factories as they appear in Le Corbusier's *Vers Une Architecture*, Paris: Editions Cres, 1923.
Fig. v Factories as they appear in Wilhelm Worringen’s *Ägyptische Kunst: Probleme ihrer Wertung*, Munich: R. Piper, 1927.
Fig. vi Examples of “Beispiel” and “Gegenbeispiel” from Paul Schultze-Naumburg’s *Kulturarbeiten*, edited by Munich: Kunstwart/G.D.W. Callwey, 1904-1917.
Chapter One: Architecture, Photography and the English Example

Since its earliest history, photography has operated within two discursive models: on the one hand, as an artful mediation between three-dimensional form and two-dimensional images, and on the other as a mode of visual documentation for the purposes of education and propaganda. The development of photographic practices and their integration with publications on architecture increased international competition at a cultural and economic level, while the mass dissemination of images facilitated the exchange of ideas and enriched the discipline. The juxtaposition of the photographic image to printed text was possible after 1882 with Georg Meisenbach’s invention of the halftone, or autotype. The development of this new publication technique surged during Muthesius’ tenure in London in the 1890’s.¹

In the story of photography and architecture circa 1900, the relays between England and Germany established central themes that contribute to the opening of this study. As the medium became more and more accessible, the cultural currency of photographs rose. Framed by larger questions relating to documentary versus artistic values of the photomechanical images, debates over authorship and the rights of ownership in the realm of media and mediation persisted. England remained the standard bearer, although Germany’s own

¹ Robert Elwall, Photography Takes Command: The Camera and British Architecture,
contributions to the fields of the printed media via illustrated magazines, journals and monthlies was also notable.

Inventions and developments occurred on both sides of the Atlantic. Henry Fox Talbot’s ushering of the Collotype constituted a radical departure from the uniqueness of the Daguerreotype, in that it allowed for multiple images to be produced. His foundational *Pencil of Nature* (1844-1846) prefigured later linguistic engagements with photography, as the metaphor of the pencil itself indicated the potential for the photograph to usurp multiple roles – both as drawing and text.\(^2\) The plates that formed the collection highlighted the photograph’s flexibility to be both paintbrush and witness. Images of china and glass arranged in a row (Plates III and IV) alongside his image entitled “Open Door” (Plate VI) accompanied by his text presented visual and spatial scenarios that served both an evidentiary and documentary function. While the images could be viewed as still lives, in Talbott’s imagination, they invoked more positivist readings of inventories presented in the manner of architectural interiors.

As the English historian of photography Robert Elwall noted, in addition to its very early reproducibility, the subsequent development of wet Collodion glass

---

\(^2\) When referring to Fox Talbot, I am relying on Carol Armstrong’s eloquent reading. See *Scenes in a Library: Reading the Photograph in the Book, 1843-1875* (Cambridge: MIT Press, 1998).
plates added a dimension of clarity that the Daguerreotypes lacked, and thus became the method of choice for architectural photography until the dry plate became available in the 1870’s; the latter offered both rapid exposure times and portability. As developments in negative processing ushered in new possibilities for the medium, photography’s discursive limits alongside its technical capabilities were continually evaluated and re-evaluated.

While credit for the revolutionizing of the photographic image as mass media is largely given to the Weimar period after World War One, pre-war developments in England, Germany and elsewhere laid the groundwork for what was to become one of the most resonant benchmarks for its subsequent theorization: the potential for its relationship to the viewer beyond the gallery or museum. To invoke Walter Benjamin, the auratic beginnings of photography were severed to such a degree that by the ushering of new techniques, the photographed object – and by extension, its content – transformed through their migrations from artifacts to consumer products. As printed images of architecture were introduced, reproduced and reified in the public realm, so too were the buildings they commodified. This notion I refer to as ‘trafficking’ is explored further in chapter three within the context of travelling exhibitions, and alludes to

---

3 Photography Takes Command, p.12.
the trajectory of objectification of architecture within the industrial conditions of technological reproducibility.

Indeed, by means of its own inherent structural features, the negative-based photograph provoked particularly proto-modern theorization. The photograph and the architecture it captured functioned in tandem as document and polemic. Through their printing and dissemination, photographs came to stand in for material objects. As such, both the image and the object became more accessible to the public at large. The growing demand for photographs of architecture began to coincide with the increasing objectification (both metaphorically and mechanically) of the buildings they illustrated. As with image rich travelogues of exotic and distant lands, photographs of architecture at the turn of the century flooded the mass market. Photomechanical reproductions of buildings in print became the standard, and the discerning public quickly became accustomed to viewing images of the built landscape via photographs.

_Photography’s Double Bind_

In tandem with these developments, debates regarding the aesthetic potential of photography persisted. Given its basis as a product of the Industrial Revolution and as a form of mechanized vision, the photograph lent itself structurally to a quasi-scientific role as a documentary tool. However, just as
quickly as its positivist status was solidified, its identification as an art form also surged. As such, the ever-increasing regularity of photographic media was matched by their commodification as artifacts. At the turn of the century, this tension in photography between its status as evidence and illustration endured. As adjuncts to texts, photographs were utilized either to supplement the histories of noteworthy monuments or to provide visual aids in the promotion of new trends in architecture and the applied arts.

As was already evident in Henry Fox Talbot’s proto photo-essay, images in this period operated in parallel registers as both precious and banal, and within the larger discursive framework devoted to the epistemological debates surrounding the medium. Technological developments in photography presented a radical alteration of reading and looking, since the relationship between text and image now juxtaposed presented the possibility of the two being engaged and read as potential equals on the page, and in so doing, blurring the structural features of both in the discourse.

The double bind of photography in this period articulated on the one hand the inextricability from both its technological status as a faithful document or specimen, and on the other hand, its aesthetization as fine art. In both scenarios, its persistent role as a mediator between the editorial decisions of the photographer, its production and dissemination remained. To be sure,
photographs were both objective records and subjective interpretations. However, in this early period in its history, the critical reception of photography was more often than not constrained by its binary reading as ‘either/or.’ Nevertheless, whether as artifacts or documents, photographs manifested themselves as the materializations of a trace, such that portraits and travel scenes alike engaged in a larger project of writing history. At the same time, an increasing disciplinary tension ensued in architectural discourse between a growing public affection for collecting painterly depictions of the built landscape, and the architect’s professional requirement for documentary “facticity” in the service of illustrative utility. It is more accurate then to understand this double bind as not a binary, but rather to admit that these seemingly oppositional tendencies and their concomitant desires and outcomes intermingled.

That photographs sublimated the physicality of buildings and thus stood in for their material presence provided an especially fertile ground for the blurring of the medium’s dual nature. Buildings have been long standing tropes in the history of photography the medium’s for obvious reasons – their immobility facilitates clear images, even accounting for long exposure times. In the period at hand, two kinds of architecture were privileged: first and foremost, those buildings considered to have significant historical value (which could in turn
serve as good pedagogical tools for students as well as practitioners), and second, new architectural developments at all scales and building types.

In popular media such as illustrated journals, photographs were divided into two categories: documents and artifacts. The two modes rarely appeared side by side. A frequent contributor on photography for the influential *Studio* magazine, Clive Holland noted at the turn of the century that photography was “one of the most popular methods of art because it (was) capable of answering exactly to the sentiments and attainments of the individual worker.”\(^4\) Holland here presumably was referring to those images that documented architecture and the plastic arts. However, as he continued, he shifted his attention to art photography:

…It is the knowledge and intuition which brings about the softening and modifying of the uncompromising character of the results usually obtained by the camera; the power of elimination of the crude or superfluous (as far as possible) on the actual negative, and afterwards on the print itself; and the introduction of atmosphere of personal feeling which goes to the making of such works as evoke admiration.\(^5\)

In the mid nineteenth century, organizations were formed to satisfy both local and national desires for these images. By the turn of the twentieth century, these organizations created the framework by which such photography was


\(^5\) Ibid., pp. GB 2-3.
professionalized. Newspapers and journals like the *Daily Mirror* (founded in 1903) were among the daily publications that began to illustrate exclusively through photographs.⁶

The growth and establishment of architectural photography as *métier* necessitated the establishment of governing rules and standards by which users and consumers alike could exert their relative roles. Further, it is widely viewed that the growth of commercial interest in this subject matter was directly proportional to an increasing middle class. Organizations that associated themselves with architectural photography quickly established themselves as distinct from “camera clubs” through their exhibition and sale of images. Almost immediately, these organizations had to cater to the often-divergent demands of private collectors and architects.

As an example, the Architectural Photographic Association (APA), which was founded in 1857, boasted more than 500 subscribers to their photographs.⁷ For a relatively small fee, members could purchase from a growing inventory of indexed images. Main topics of interest included views of romantic ruins and the

---

⁷ "Architectural Photographic Association," *The Photographic Society* vol.4 no. 59 (October 1857), 52.
country house.\textsuperscript{8} In addition to its subscription services, the APA staged exhibitions and hosted public lectures, all of which helped elevate the public’s exposure to architectural photography.\textsuperscript{9} In addition to supporting the work of amateurs, the association also represented the work of notable art photographers Roger Fenton and Francis Bedford, as well as well known figures from abroad.

In the 1860’s, England saw the emergence of firms like Bedford Lemere (FIGURE 1.1), and Thomas Lewis – two photographers examined in greater detail in chapter 2 – who specialized in contemporary buildings and interiors, as well as those manufacturers of camera kits marketed specifically to architects. (FIGURE 1.2) These photographers often shot projects and views to fulfill particular requests by architects. Effects of light and shade were eschewed in favor of the clear definition of forms. Also in terms of subject matter, the bias towards topographic photography was abandoned along with concerns for picturesque-ness. As noted historian James Ackerman has remarked, the “modern history of

\textsuperscript{8} Robert Elwall argued that a renaissance of country house building coincided with the rise of photography. Elwall, \textit{Photography Takes Command}, p.13.

\textsuperscript{9} Ibid.
architecture had its origins in Western Europe at about the time when photographs of buildings became available to scholars.\textsuperscript{10}

Nonetheless, in the middle of the 19\textsuperscript{th} century, amateur photographers still constituted the majority of practitioners. They had little interest in documentation but rather focused their efforts on painterly depictions that brought the photograph closer to drawing. Since the notion of a general rather than specialist viewing audience was considered from the beginning, the articulation of tectonic detail was not a priority. Only architects appeared interested in architectural details, and partially as a result of this fact, contemporary buildings were not considered relevant photographic material. Eventually, debates regarding the facticity of the image grew alongside demands for accurate recordings of architecture. As a result, the role of the amateur photographer in architectural publication circles waned in influence.\textsuperscript{11}

\textit{Architectural Photography and Remote Tourism}

The 1850’s proved to be an influential decade in the early history of architecture and photography. Technical developments regarding both the


\textsuperscript{11} The telephoto lens was invented in 1893, which allowed the greater ease of details and close ups. See Ackerman, p. 16.
apparatus (camera) and the product (image) came in tandem with an ever-increasing appetite for both historic preservation and remote tourism. In photographic space, the scale of the world expanded to seeming infinity, all the while collapsing in an everlasting instant of time, and thus mirrored the perpetually oscillating scale of the spectator from individual to mass audience. This power of the photograph to collapse and re-present the material world into consumable pieces satisfied both the desire of individuals curious about the world beyond their physical reach, and the wishes of nations to catalogue and preserve their built and natural landscapes.

Indeed, the foundations of architectural photography shared their footings with travel photography, historic preservation, and an increased commitment to physically manifest a collective memory via the patrimony of historic landmarks. Distant lands were brought home and collected in miniature. At a middle scale, photographs were increasingly utilized to amass encyclopedic portraits of the city. Individual architects were not singled out but rather tectonic details and fragments were collated to assume a complete visual inventory of the urban fabric. At a more local scale, photo societies grew in number as amateur photographers catered to a consumer class interested in purchasing images of landmark buildings.
With the formation of such organizations as the *Mission Héliographique*, administered in part by the French governmental agency the *Commission des Monuments Historiques (1851-1860)*, the photography of individual monuments were catalogued visually as a subset of a larger multinational project to record the landscape. The *Commission*, alongside the *Société Héliographique* (also founded in 1851),\(^{12}\) was a central state sponsored inventory of the country’s historic monuments whose primary aim was to preserve and illustrate indigenous forms, much as lithographs had done prior to photography.\(^{13}\) Alongside architectural fragments, photographs comprised a large percentage of the *Commission’s* holdings. Central archiving initiatives like the *Mission* engaged some of the rising stars of French photography including Henri Le Secq and Édouard Baldus.\(^{14}\) Despite the *Mission’s* multi-layered mandate to engage photography as both a technical tool to function didactically and as an art medium, many of the photographers were trained as painters.\(^{15}\)

Given this fact, it is not surprising that the output of the endeavors


\(^{13}\) For more on the Mission, see Phillipe Néagu et al., *La Mission Héliographique – Photographs de 1851*, (Paris: 1980).

\(^{14}\) Interestingly enough, Baldus also contributed images to the APA. See Elwall, pp. 14-15.

\(^{15}\) Boyer, p. 47.
was viewed as antiquarian, picturesque, and archaeological, taking its formal
cues from early modes of illustration and easel painting. As historian Eve Blau
has remarked, the range and scope of subjects were limited to those that best
lent themselves to nostalgia; these images were more renderings of effects
than recordings of reality. In addition to stylistic leanings, the conventions of
subject were lifted from past illustrative models and continued to dictate the
standard by which the built environment was captured.

The Commission provided a blueprint for subsequent organizations. For
example in Germany, the Berlin based Royal Photographic Institute (\textit{königliche
Messebildanstalt}, est. 1885) provided itinerant photographers with the most
advanced camera and lens technology to document architecture of all scales
throughout the country to develop a centralized image bank. The principal
mission of the Institute was pedagogic; prints were ordered by art historians
throughout the European continent but were especially sought out by American
institutions of higher learning. Particular camera positions, which allowed for
focal lengths that produced the least amount of distortion, were codified. In the
eyes of one journalist Max A.R. Brünner, the organization by 1910 had

\begin{footnotes}
\item[16] Eve Blau, “Patterns of Fact: Photography and the Transformation of the Industrial
\item[17] Blau, “Patterns of Fact,” p. 42.
\item[18] See Max A.R. Brünner, “Photographic Affairs in Germany,” In \textit{Photo Era} vols. 24-25
(1910), p. 46.
\end{footnotes}
succeeded in providing thousands of examples of “illustrated data” that promised “absolutely correct measurements of the various dimensions,” so that “the photographs could take the place of plans or designs accurately drawn to scale.” He went even further by proclaiming that the images would prove even more accurate than any in situ “inspection.”

This interest in recording and securing the historical legacy of national treasures was also on the rise in England. Reflecting this interest, the Reverend F.A.S. Marshall noted the seemingly endless possibilities for the medium: “We cannot conceive of a more perfect history of everything that belongs to man than Photography is able to record; and not merely of what belongs to man himself, but of everything that can occupy his attention: in short, everything that can be subject to permanent observation is rendered permanent…”

As a case in point, the coincidence of photography’s technical developments and London’s transformative industrialization manifested itself in the formation of other societies whose explicit aim was to bear witness to the city’s physical transformation. Rapid infrastructural changes ushered the development of new transportation typologies and road networks, which in turn threatened to displace much of the city fabric in its wake. As outmoded building

---

19 Ibid.
20 Ibid.
stock lost its commercial viability and cultural relevance, interest in its visual preservation grew, and in turn engendered a new cycle of consumption and exchange. Those interested in owning a piece of soon-to-be-redundant history could purchase images of such buildings before their renovation or demolition.

In this vein, the commercial interest and viability of buildings shifted from their use and habitation to their visual preservation. So, unlike in the case of the Mission, what was at stake for the interests such as The Society for Photographing Relics of Old London (SPROL) was to record the rapid changes to the urban core of the Industrial Revolution. In this sense, the project was more akin to Eugène Atget’s project to document Old Paris. As such, the type and scale of building stock documented by the Society – not to mention the client - differed quite sharply from the nationally sponsored Mission in France. Here, the desire to document the unremarkable face and physical presence of quotidian London was more pressing.

Alfred Marks was the coordinator of subscriptions and selected the sites for documentation, commissions that were initially carried out by Alfred and John Pool, and later by Henry Dixon (numbering 120 plates in all). In letters sent to both The Times of London and the Builder in March of 1875, Marks announced

22 For an incisive analysis of Atget’s body of work, and his critical role in archiving the holdovers of “Old Paris,” see Molly Nesbit, Atget’s Seven Albums, (New Haven: Yale University Press, 1994).
his intention to propose a member-based initiative whose aim it would be to photographically record the Oxford Arms in Warwick Lane, whereby the images would be offered to subscribers who were “interested in London antiquities.” The first series - six carbon prints of the endangered buildings - were sold at a cost of around 10 Shillings per set. 23 These first images were met with positive reviews, as critics echoed Marks' interest in conveying the “picturesque” qualities of the structures, rather than merely providing a “record.”24

Marks’ particular aesthetic approach towards preservation was not unique to this example; it is as if the memory of the built could only be rightfully served if the images fulfilled documentary and pictorial demands simultaneously. Indeed, in this series and others sold by the Society, the images needed to fulfill not only their populist agenda, but also their picturesque mandate in order to be consistent with the “manner” and character of the buildings; merely providing a faithful recording of their tectonic qualities did not suffice.25 The Society was

24 A set of the original press releases of the Society and series of 120 prints can be found in the archives of the Canadian Center for Architecture (CCA). The above citation is made in reference to images of the churchyard and tower of St. Bartholomew. The full citation reads as follows: “Our aim- and we may in future numbers return to the subject, by no means exhausted in this set - has rather been to show the picturesque manner in which the ecclesiastical and civil buildings are, as it were, dovetailed together in the quaintest nook of old London.” See CCA archives [PH77:028].
25 Bush, Old London, p.34.
encouraged to continue with its mission and ultimately produced 120 prints in all, in effect crafting a composite monument to the old city.

This use of photography would seem to contradict the prevailing idea (not only in England), about the medium with respect to architecture, namely that its strength lay in constructing a visual history unencumbered by artistic requirements for beauty and harmony. The images of old London were also a testament to an anthropomorphic interest on the part of the subscribers, since in them, the urban fabric resembled “more the results of growth than design.”

The Media Fog

A long tradition of visual criticism has devoted much analysis regarding the photograph’s implications for both active and passive vision, as both a dynamic agent for change and a still and unmoving memorial to the past. In his “Small History of Photography” (1931), Walter Benjamin distinguished between modes of artistic reception, namely in how the formation of aesthetic experience (as Erfahrung) had altered fundamentally due in part to transformations in image-producing technology. At stake for Benjamin was how technological developments engendered new modes of perception and experience. More specifically, as they related to the work of art, the lines between reading, looking

26 Press release from the Society in CCA archives [PH 77: 028]. Alfred Marks made this remark in reference to images 61-72.
and knowledge were redrawn: loosely citing Laszlo Moholy-Nagy, he remarked that “‘The illiteracy of the future,’ someone has said, ‘will be ignorance not of reading or writing, but of photography.’”²⁷ To which he added:

But shouldn't a photographer who cannot read his own pictures be no less accounted an illiterate? Won't inscription become the most important part of the photograph? Such are the questions in which the interval of ninety years that separate us from the age of the daguerreotype discharges it historical tension.²⁸

In this context, Benjamin was making clear that a second generation of photography required new modalities of vision, whereby the image and text (as caption and as body) presented new ways of reading.

In order to respond adequately to the new perceptual challenges faced by the medium, Benjamin advocated a new kind of looking and reading - one that involved the whole body and not just vision: “Only in that space to which profane illumination initiates us … when in body and image space so interpenetrate that all revolutionary tension becomes bodily collective innervation, and all the bodily innervations of the collective become revolutionary discharge.”²⁹

---

²⁸ Ibid.
For Benjamin, collective vision was cast as a revolutionary imperative that engaged the whole body in active reception (Liebhaft), a reading marked by agitated rather than passive looking. Further, just as he had invoked a mass audience and advocated its awakening, this potential of a collective spectator was already in place in the 19th century with the advent of publishing on a large scale. Benjamin was reflecting on the imperative of new modes of aesthetic literacy in order to see through the “fog” of images impressed upon modern society.30

*Photolithography to Collotypes to Halftone Printing*

While Benjamin was referring to the nineteenth century retrospectively and through the lens of Eugene Atget’s interwar work, this flooding of the popular visual marketplace had already been rehearsed in this period, whereby developments in reproduction processes for illustration and in particular, for architectural renderings in books, journals and periodicals roughly corresponded with the sheer volume of image-based media available to the public. It could be argued that, in general, the main source of exposure to notable architecture had in some sense always been via second-order illustrative means (rather than in

30 Ibid.
situ observation), but advancements in optics and reproduction towards the latter stages of the century opened up an entirely new scale of visual scholarship.

Photolithography - a reproduction process by which the original image is transferred to a lithographic plate via a photographic negative - eliminated the intermediary step of an engraver, and thus heralded a major streamlining in the printing industry. However, photography itself was more often only used as a mediating device rather than an image referent in its own right. It was not until the 1880’s that photographs were published in a more direct manner, when Collotypes and later process block halftones became the standard bearers for the printing and publication of images.

Collotypes enabled photographers to render precise images. Nonetheless they were too expensive to be used on a mass scale, and as such, they lent themselves to very specific kinds of publications; since images were added as plates at the end of the text, Collotypes were reserved for more limited run large format editions. I would further argue that the use of Collotypes predetermined the type and style of architecture represented. As I elaborate in chapter two, Hermann Muthesius was keenly aware of the different readings, and the varied discursive outcomes of mechanical printing processes.

---

While photography in architectural periodicals made its debut in 1881, the frequency by which such images were used did not peak until the 1890’s. The year 1891 marked the beginning of what was to be a series of large format books on English architecture published by the noted architectural press B.T. Batsford, and again Collotype plates were added to the end of the volumes.

The development of halftone printing to the process block method exponentially expanded the commercialization of images, for it was the first instance in which photographic images could be printed alongside and simultaneously with text. This method was achieved by re-photographing the original image with a camera fitted with an etched screen, which in turn broke up the image into a dot matrix. Unlike Collotypes or other types of photolithographs, block prints had raised rather than smooth printing surfaces made of glass or metal. This milestone in the technical history of photography ushered in a new generation of publications devoted to architecture. Like their mid-century counterparts, English publications more often than not served as models for their German counterparts.

---

The Rise of Illustrated Magazines and Periodicals

It is not accidental that concurrent with these developments, magazines and journals devoted to architecture also came into being around the century’s turn, providing yet another context in which the photographic medium was promoted, often being at the forefront of advances in architectural photography. These publications vigorously adopted the halftone reproduction technique. (FIGURES 1.3-1.4) Technical advancements with this means of printing made it possible for the first time to juxtapose type and image in a unified composition, ensuring a consistency of quality for the photographic image, not only revolutionizing the medium by expanding its viewing audience, but also initiating the commissioning of new projects by admiring subscribers and would-be clients.

The celebration of photography in this period was not limited to the main body of the text. In the advertising section of such publications, various firms promoted their new technical apparatuses and typesetting services. The sales pitches clearly had architects in mind; in an example from the firm of Vaus and Crampton, “A special and distinct feature is made in the reproduction of architectural designs…to secure brilliancy in detail.” Many such advertisements could be found in The Studio and Academy Architecture – another popular illustrated journal from the period. (FIGURE 1.5) As I elaborate in the next chapter and given the countless references in his correspondence, Muthesius
knew these publications and their editors, and these printing techniques were also adopted in his layouts for The English House. These publications also had more or less explicit concerns regarding the use of images. Editorial decisions appeared to favor certain photographers over others, and these decisions also underscored a tandem promotional platform for preferred architects to display work that was deemed appropriate to the medium.

Increasingly, all three groups (architects, editors, and readers) formed a triad of tastemakers. Nonetheless more often than not, individual photographers and the firms for which they worked remain anonymous, arguably since their work adopted a strictly documentary function. This was not the case with so-called ‘art’ photography; art and images of it demand citation whereas images of architecture were considered neutral documents - a condition that rendered them seemingly more accessible, democratic and universal.

Such divisions also held true in the recording of particular architectural types. Images of domestic examples were given no credit, while churches and other more public edifices were. The ratio of text to image also varied greatly among the publications. For example, Academy Architecture - a bi-monthly journal founded by the Swiss architect Alex Koch - was comprised almost entirely of images. In contrast, The Studio provided commentary and reporting on current exhibitions, lectures and other events on view.
The origins of another magazine *Country Life* also lay in the new technology. Founded by Edward Hudson, the magazine’s initial mission was to mobilize photography in order to preserve and document the endangered rural landscape. As in previous decades, the countryside was romantically and nostalgically represented, and yet ironically captured by the latest techniques in photochemical reproduction. In addition, photographs from this period reflected a wide range of quality and sources. The photographer Charles Latham was the standard bearer in this context, and help define the magazine’s aesthetic through his images, which probably started appearing in 1898. The editors of the *Architectural Review* praised his work for its “faithfulness,”33 and yet images that the *Review* in the same editorial had dismissed as “impressionistic” also appeared in the magazine.34 Once again, these two competing modes of photographic representation reflected the debates of the time about photography’s merit as an art form.35 Ultimately, the prevailing consensus among editors of illustrated publications around 1900 was to adopt a documentary stance vis-à-vis the photography.

Finally, alongside the professionalization of architectural photography was the emergence of another aligned discipline, that of architectural history. As

---

33 As cited in Elwall, pp. 37-38.
34 Ibid.
35 Ibid.
many historians of photography have asserted, the beginnings of architectural history (as a discreet discipline apart from other histories of the visual arts), coincided with the codification of photography as an illustrative means to record the built landscape. Archives that had already been established witnessed exponential growth, and as a consequence, methodologies of taxonomic classification borrowed from the natural sciences were adopted as a means to organize and understand common formal traits among buildings. As with the fine arts, works of architecture – and by extension the authors of these works - were subject to normative categorization under umbrella terms such as “style,” where differences were eschewed in favor of seamless, often teleological narratives.
Fig. 1.1 Advertisement from *The Studio* magazine for Bedford Lemere, 1905. Courtesy University of Wisconsin Libraries.

Fig. 1.2 Advertisement from *The Studio* magazine for Ross camera manufacturers, which targets architects among other potential buyers, 1905. Courtesy University of Wisconsin Libraries.
with a number of interesting bronzes, jewels, etc., with some fine pieces of porcelain designed by Theodore Schmutz-Baudiss, which are undoubtedly so far the best modern examples of German work of the kind. Their author has lately been appointed Director of the Royal Porcelain Manufactory of Charlottenburg, and there appears some hope that he may revive its old traditions. Some clocks designed by Mr. Murawe, shown in the same section as the porcelain of Mr. Baudiss, are also worthy of notice. They are quite in Olbrich’s style, and altogether charming.

Other rooms of secondary importance are those designed by Messrs. Arno Körnig and Heinrich Kleinheppel, with that by Frau Gertrude Kleinheppel, of Dresden; and although it cannot of course be classed as modern, the Romanesque Chapel of Professor Otto Lier, of Hanover, should be noted. I should also like to call attention to the marqueterie panels of the Room designed by Carl Spindler, of Strasburg, in the Alsace-Lorraine Section, for although there is nothing very remarkable in the architectural design of the furniture, the panels are fine pieces of decorative art. Amongst the minor exhibits of Germany are some good designs in pewter by Messrs. Kayser and Scharf, some chandeliers by Seifert, leather-work by W. Collin of Berlin, bookbindings by Kersten, bronzes and textile fabrics by Willy O. Dressler, porcelain by Müller of Dresden, enamelled pottery by Laeuger of Karlsruhe, and some really good enamelled plaques by von Heider. The metalwork is especially good, and in it the influence of Mr. Berlepsch is more distinctly seen than in the furniture, notably in the tea service, by Mr. Kühler, of Munich. Good too are the carpets from the celebrated “Kunstwebeschule,” of Scherbebeck, especially those after the designs of Messrs. Vogeler and Christiansen, which excel even those of the regretted Eckmann, whose colouring was, perhaps, a little too vivid.

The painting and sculpture—notably the bust of Nietzsche, with its remarkable expression, and the panel above the mantelpiece, the colouring of which recalls the work of Böcklin—in the Room of the well-known designer, Stoeverg, is well worth careful study, though there is nothing of especial interest in the furniture.

The exhibits in the Section reserved to the graphic arts are, of course, numerous, and of great value, for Germany is well to the fore in that particular field. The books, designs for bindings and engravings collected by the “Buchgewerbeverein,” of Leipzig, are most interesting; and the “Künstlerbund,” of Karlsruhe, exhibits many most beautiful chromo-lithographs, amongst which those by Bisse and Kempmann are especially noteworthy.
Crane has chosen for the motive of the decoration of this room. "Perplex no more with Human or Divine, To-morrow's tangle to the winds resign, And lose your fingers in the tresses of the Cypruss-slayer Minister of wine," might be its motto, or any of the dozens of original quatrains in praise of the grape which Fitzgerald distilled into some three or four in his classic paraphrase.

Panels of the frieze and of the ceiling here illustrated will show how Mr. Crane has treated his theme, and introduced the "turned-down" empty glass of the Persian singer, as well as the "twisted tendril of the growth of God." It is a happy instance of appropriate decoration for a dining-room, this choice of Omar's vine; which, as readers of his works know well, is not so much a Bacchanaian symbol as an emblem of the "Wine of Life" that keeps "oozing drop by drop"; of

The more obvious examples of Crane's failure, "The Stork and the Fox," "The Fox and the Grapes," "The Man and his Cloak," all these need no comment, except that they afford another instance of Mr. Walter Crane's felicitous treatment of an anecdote, so that it tells its tale at a glance.

The sideboard, ornate though it be, is not out of harmony, but keeps its place as part of the scheme. The mantelpiece is a good example of Mr. Philip Webb's original and dignified treatment of material, its Persian tiles with hawking scenes are framed in sober mouldings of Purbeck marble, so that the whole takes its appointed place. To read a description of this room may call up a picture of glitter and over-gorgeous ornament; yet one glimpse of it would prove how false were such an impression. Although not a square inch is free from decoration, the breadth of the whole is preserved, and the place,

Fig. 1.4 Example of an interior view from The Studio magazine, 1905. Courtesy University of Wisconsin Libraries.
Fig. 1.5 Advertisement from *The Studio* magazine, 1905. Courtesy University of Wisconsin Libraries.
Chapter Two - Hermann Muthesius’ Materialist History: The English House and the Tectonics of Photography

The first thing in the arts, which we should learn from Germany is how to appreciate English originality. Up to about twenty years ago there had been a very remarkable development in English Art of all kinds. For five or six years, round about the year 1900, the German Government had attached to its embassy in London an expert architect, Herr Muthesius, who became the historian (in German) of the English free architecture. All the architects who at that time did any building were investigated, sorted, tabulated, and I must say, understood.1

In an address given to the Architectural Association in 1915 entitled “Modern German Architecture and what we may learn from it,” English architect and educator William Richard Lethaby (1857-1931) was clearly aware of the degree to which Germany was “racing” ahead. He added “with great hesitation,” that despite his patriotism for his own country (a sense of pride especially vital “in serious times”), and despite the obvious exploitation of English ideas in German hands, “German architects have seized on this theory of a ‘real architecture’ – or they have reached for it themselves.”2 Lethaby’s view on architecture circa 1900 was one that defined a discipline that needed to evolve “within its own sphere,

2 Ibid.
(and) not to be forever casting back to disguise itself in the skins, which it had long ago sloughed off." Meanwhile, English architects were “caught up in …recurring reactions,” and it was the task for upcoming generations of practitioners to “get in the habit of seeing things as they are, with the dirt strewn paper and orange peel thrown in.”

Like his contemporary Hermann Muthesius, Lethaby collated the essentially progressive elements of the prominent nineteenth century English aesthetic theorists. Despite his equivocal stance vis-à-vis the mechanization of hitherto handwork, he foreshadowed a theory of functionalism along the way by standing in a contested trajectory of succession that passed from Pugin, to Ruskin, Morris and Webb. Lethaby’s preference was for an architecture defined by “order fitness and soundness,” one in which the functional and material content of an architectural object superseded its formal expressiveness. These built works were countered by those distinguished only by their imitation of history – the latter he defined as a backward looking tendency in architecture of that period that he termed “archaeology.” As a critic, Lethaby tested the ideological and practical problems endemic to the concepts anchoring this

---

3 Ibid.
4 Ibid.
5 This has been an attribute of selective historiography often associated with Nikolaus Pevsner, among others. See for example Laurent Stalder.
pedagogical lineage, as well as the burgeoning of various revival styles of his time, ultimately questioning both. He extended and re-assessed the architecture culture of turn-of-the-century England, attempting in theory what he abandoned in practice.\(^7\)

Lethaby’s equivocal stance on the modern was due in no small part to the fact that the intellectual promise of his writings failed to generate any new imagery or formal resolutions. Industrialization in the nineteenth century - largely ignored by Lethaby’s own production and by the architects he admired - advanced inexorably, yet his pronouncements of ‘honesty’ even within the Arts and Crafts idiom rarely translated into technological innovation. Lethaby’s career lay in the disjunction between the often reformist tone in his writing, and the moribund atmosphere of both theory and building practice in England by the early twentieth century. While lacking in heavy ornamentation and striving for “integrity” in his use of materials, Lethaby’s built projects could scarcely be

regarded as modernist precursors. Moreover, while he has been credited with developing in his writings a faith in the aesthetic priority of utility, this faith led in part to the character of the modern movement in Germany, not England.

Lethaby’s relevance in the continuum between the Arts and Crafts and the Modern Movement in England has been challenged by some historians\(^8\) who rather position Muthesius as a more historically significant link between English domestic architecture and the German Werkbund.\(^9\) However accurate this appraisal may be, Lethaby, like Muthesius, longed for the day when “a standard of good quality” would eradicate “damp, cracked and leaky architecture,” and give way to houses “as efficient as a bicycle.”\(^10\) The implied objectivity in Lethaby’s hermeneutic of architecture dictated that meaning lay in things and not in words.\(^11\)

Not unlike his English counterpart, Hermann Muthesius (FIGURE 2.1) espoused the recognition of a so-called ‘real’ architecture informed by economic concerns as well as the cultural necessity to formulate a particular national response to technical advancements. Like Lethaby, he agglomerated the

\(^{8}\) See footnote 6.
\(^{9}\) This claim has been made more readily by German historians. See for example, Julius Posener, “Muthesius in England,” Hermann Muthesius 1861-1927, (London: The Architectural Association, 1979).
\(^{10}\) W.R. Lethaby, “The Modern Position,” in Architecture – An Introduction to the History and Theory of the Art of Building, p. 249. These sentiments are echoed in the Werkbund’s own pronouncements regarding standardization.
progressive elements of prominent nineteenth century English aesthetic theorists; the centrality of utility as a structural feature of visual valuation emanated from this *fin de siècle* milieu. The turn to mechanically derived images reflected the growing suspicions at the time of conventional models of mediation – lithographs, etchings, woodcuts, watercolors, and the like. Muthesius’ choice of photography over other modes of representation, and the nature of the images themselves - driven by factual not stylistic imperatives – reiterated his objectivist agenda of so-called “Sachlichkeit” – a word that has a rich lineage in the German discourse on architecture and the applied arts.\(^{12}\)

The ‘investigating’, ‘sorting’ and ‘tabulating’ to which Lethaby referred had primarily the *English House of 1904-1905* in mind, but also presumably Muthesius’ other publications at the time of his English tenure, including but not limited to *The English Building-Art of Today* (*die englische Baukunst der Gegenwart*) of 1900-1903, and *Style-Architecture and Building-Art* (*Stilarchitektur und Baukunst*) of 1902. These terms also enforced the structural features of his books and articulated a series of operations that defined the technocratically fastidious methodology of a collector - a rabid researcher who scoured all the

\(^{12}\) While it precedes the stylistic moniker from the 1920’s coined *Neue Sachlichkeit*, the word *Sachlichkeit* should not be used uncontested as simply a precursor. While the former proliferates German language discourse in the latter half of the nineteenth and early twentieth century, *Neue Sachlichkeit* is explicitly a product of the Weimar. On *Neue Sachlichkeit*, see for example Fritz Schmalenbach’s definition in: “The Term *Neue Sachlichkeit,*” in *Art Bulletin* vol. 22, No. 3, September 1940, pp. 161-5.
contemporaneous media outlets available to him, including but not limited to books, exhibitions, and illustrated magazines.

Chapter two expands on the groundwork laid in the first chapter, that is of the relevant developments in architectural photography and photojournalism in England and explores how they were partial instigators for Muthesius’ own development as an astute propagandist. The wedding of the photographic medium to architectural debates in Germany before World War One owes at least a partial debt in content and form to Muthesius’ writings in the first decade of the century, namely while he was on assignment in England as the cultural and technical attaché to the German Embassy.

These early writings reflected his progressive approach to practice and pedagogy, as well as his enthusiasm for photography as a ‘pertinent’ (gehörige) medium for instituting reform - indeed the only medium that could provide a ‘true picture’ of its subjects. In this chapter, I argue that Muthesius used photographs in his early publications - images that were devoted to extending the virtues of the English “Free” architecture to the German public— in a visually objective way; one which mirrored his tectonically pragmatic, objective or sachlich approach to architecture.

---

13 To my knowledge, no complete English translation of the volumes exists. Translations unless otherwise noted are mine. Hermann Muthesius, Die englische Baukunst der Gegenwart: Beispiele neuer englischer Profanbauten (Leipzig: Cosmos, 1900-1903), p. iii.
To be sure, The English House (FIGURE 2.2) remains his best-known and most-cited work, and garnered much praise from his contemporaries and peers – most notably among them Lethaby. However, Muthesius’ reliance on photographic reproductions to anchor the discursive impact on many of his writings from this prolific period has been largely overlooked. Indeed, the study of this building type did not originate with Muthesius,\(^\text{14}\) but his strategic use of photographs in relation to his writing distinguishes his contribution from his predecessors.

In fact, his publications from this period constitute some of the earliest examples of the systematic and directed use of photographs by any architect of the time, and they signal not only the shift in how photographs were being appropriated for publication, but specifically in the case of Muthesius’ and later Werkbund rhetoric, how Sachlichkeit could manifest itself through both tectonic and visual principles. The books were not image centered but image fueled.

This chapter also theorizes how Muthesius’ use of photography can be overlaid with the architect’s rhetorical migration from Stilarchitektur (Style-Architecture) to sachlich Baukunst (Building-Art) - terms that propagated his writings from this time and that persisted throughout his career as a writer and

\(^{14}\) See for example Robert Dohme, Das englische Haus (Braunschweig: George Westermann, 1888), and Constantin Uhde, Baudenkmaeler in Grossbritannien (Berlin: Ernst Wasmuth, 1894).
founding member of the German Werkbund. Indeed, the role of photography in the corresponding texts can also be read alongside his use of these terms. In these texts, Muthesius was rarely explicit his views on photography, let alone on the perceived stylistic restraint of this medium as analogous to his larger architectural project. Nonetheless, his correspondence with his editors and photographers, alongside his scant but telling remarks on photo-based images provide a contemporary framework for merging his deployment of the medium to the terminology underpinning his written arguments.

At the outset, it bears noting that the term *Sachlichkeit* has a complex history dating from the late nineteenth and early twentieth century German discourse. As other scholars have noted, the multi-stranded valences of the term make it virtually impossible to translate into English. Rather, depending on the context in which it is used, *Sachlichkeit* spans aesthetic, socio-economic, technical, material and spatial ambience, even moral criteria for evaluation. In his essay entitled “From Realism to *Sachlichkeit*, the Polemic of Architectural Modernity in the 1890’s,” historian Harry Francis Mallgrave discusses the context in which principles of *Sachlichkeit* entered into modernist discourse in Germany. Namely, he argues that Richard Streiter (an architect who abandoned practice to write a dissertation on Karl Bötticher under Theodor Lipps) was the first to
mobilize the term towards architectural discourse.\textsuperscript{15}

In an essay from 1896, Streiter centered his remarks on the state of the German Arts and Crafts movement. He defined \textit{sachlich} amidst extended notions of the \textit{bürgerlich} or middle class to denote ideas of honesty, simplicity and lack of pretension in architecture as well as in society.\textsuperscript{16} He argued that the sobriety of earlier \textit{sachlich} tendencies in Germany (i.e. the Neo-Classicism prevalent since the 19\textsuperscript{th} century), tended to be imitative of classical forms, and contrasted with later iterations in America and England. In Streiter’s view, these examples demonstrated that \textit{Sachlichkeit}, (translated by Mallgrave in this context as the “simple straightforward solution to a problem”),\textsuperscript{17} could unite practicality with artistic mastery, thus obviating the need for the two terms to serve opposing aims. In a second essay written in the same year, Streiter wedded \textit{Sachlichkeit} to the broader term ‘realism,’ where “real conditions in the creation of a building (are) the most perfect fulfillment of the requirements of functionality, comfort,

\footnotesize
\begin{itemize}
\item \textsuperscript{16} Richard Streiter, “Das deutsche Kunstgewerbe und die englisch-amerikanische Bewegung,”(1896) in \textit{Richard Streiter: Ausgewaehlte Schriften}, (Munich: Delphin, 1913), p. 11. The connection between \textit{Sachlichkeit} as honesty, simplicity, and unpretentiousness with the adjective \textit{bürgerlich} was introduced by Cornelius Gurlitt. See Mallgrave, p. 290.
\item \textsuperscript{17} Ibid., p. 294.
\end{itemize}
health – in a word, Sachlichkeit.”\textsuperscript{18}

As Streiter’s writings prove, the rhetorical articulation of Sachlichkeit as both a formal and functional imperative was not unique to Muthesius. Nonetheless, as the so-called “maestro of Sachlichkeit,”\textsuperscript{19} the latter was a deserving architectural heir to Streiter’s writings.\textsuperscript{20} A bureaucrat to the end, Muthesius keenly sought to centralize architecture’s position within the educational system of the Wilhelmine government and reinforce its wider cultural reach by appealing to sachlich solutions sensitive to vernacular contexts and to the demands of modern society.

Muthesius’ essay “Neues Ornament und Neue Kunst” of 1901 endorsed the “new art,” and prefigured many of his later writing on Baukunst. Referring to a Munich interior designed by Rudolf Schroeder, a review of which was written by his close friend and colleague Julius Meier-Graefe, Muthesius praised it as evidence of sachliche progress, a plea for orthogonality, absence of ornament, and the sanitation and health of interiors (i.e. the use of ‘simple’ furnishings).

\textsuperscript{20} Mallgrave, p. 305.
insuring ventilation and bodily comfort.\textsuperscript{21}

Muthesius’ polemic \textit{Stilarchitektur und Baukunst} fashioned a convincing platform for a proto-rationalist (as \textit{sachlich}) architectural philosophy through a purposeful transposition from ‘Style-Architecture’ to ‘Building-Art.’ Since the latter term for Muthesius exemplified a more pure tectonic sensibility and formal self-restraint - both requisite features of the so-called ‘modern’ – he explicitly distinguished it from the ornament laden retrograde architecture that had defined much of the nineteenth century.

In his introduction to the English edition, Stanford Anderson - another pre-eminent translator of \textit{Sachlichkeit} in architectural discourse – contends that Muthesius’ aim was to reconcile modern means of production with the everyday needs of society.\textsuperscript{22} As such, \textit{Sachlichkeit} could also point to Muthesius’ evaluation of vernacular architecture and thus to his preference for the term \textit{Baukunst}. Indeed, through Muthesius’ insistence on the use of terminology like \textit{Baukunst}, built form was re-packaged and disseminated within the more expansive domain of the applied arts, and also more readily aligned with local building traditions.

\textsuperscript{21} The review was written a year later in the same journal \textit{Dekorative Kunst}. Hermann Muthesius, “Neues Ornament und Neue Kunst,” \textit{Dekorative Kunst}, vol.4, no. 9 (June 1901), p. 350.

Muthesius’ interest in promoting a symbiosis between people across socio-economic strata with their surroundings can be read as an attempt to bridge the differences between the *sachliche Kunst* reflected so prominently in English domestic architecture, and the ‘pure’ *Sachlichkeit* of nineteenth century industrial building and infrastructural developments. As Anderson argues, while *Sachlichkeit* in the strict sense was marked by rationality, functionalism, and *Zwechmassigkeit* (translated by Anderson as “the direct satisfaction of need”), *sachliche Kunst* satisfied the progressive demands for efficiency and productivity, while also catering to the desire to address contextual questions of atmosphere or milieu. In this way, Muthesius’ ideas of *Sachlichkeit* were not meant as mimetic counterparts to machine fabrication, but rather as complements to the purported self-discipline promised by the new technologies. His particular harnessing of *Sachlichkeit* was not just evidence of his proto-functionalist stance; rather it revealed a methodology of crafting a discourse that addressed aesthetic as well as economic, environmental, and political concerns. This early modernist approach to ‘taste training’ had an inevitable moral valence and was

---

deemed essential to the future prosperity of the German economy, but the more pressing task at hand was the larger renovation of German culture – a renovation that sought to promote a national or indigenous design asceticism, while also appealing to common sense applications of artistic practice into everyday life.

In an essay that explores ideas of the vernacular in Le Corbusier’s work and its larger relation to the discourse of Sachlichkeit in the Werkbund, Francesco Passanti argues that the word incorporated a notion of everyday-ness absent in classicism. He writes: “unlike classicism, which was a closed formal system…the vernacular model insisted on connecting architecture to something external to it, the identity of a society; and it further insisted that such connection be not invented but found.”24 The figure of the collective was allied with Sachlichkeit to serve a therapeutic function, to remedy the ills produced by modern life.

Extending the rhetorical logic of the term within the context of Muthesius’ use of photographs, it is my contention that the manner in which photographs were chosen and deployed in his writings mirrored his advocacy of a normatively formal architecture that, as early as his writings from 1901, combined both a

24 It is not difficult to see the ways in which the language evoked in the early years of the Werkbund is echoed in Le Corbusier’s writings after the war - namely the order, harmony, and moral “hygiene” of the Greek Temple fused with “le standart” of the automobile in Vers Une Architecture (1923). This is confirmed by our knowledge of Le Corbusier’s contact with the Werkbund. Passanti states, for example, that he was present at Muthesius’ address in 1914. Francesco Passanti, “The Vernacular, Modernism, and Le Corbusier,” JSAH volume 56, no. 4 (December 1997), pp. 442-443.
vernacular and tectonic realism. Nonetheless, as Christine Boyer notes, Le Corbusier’s affinity for classicism endured despite the evolution in his thoughts on the subject. Ultimately one could argue that his notion of *Baukunst* would have allied Germany’s industrial progressiveness with the French artistic ideals he held in such high regard.

The English Building Art of Today

Beginning with his multi-volume folio *die englische Baukunst der Gegenwart*, which has been viewed as a test run for the later three-volume study on the English house, Muthesius advocated a sober, realist, or objective design philosophy. In its preface, Muthesius expressed his aims for the publication: that through the “correct” interaction of word and image, the volumes offer the most “complete picture” (*Gesamtbild*) possible, and thus function more than merely “an architectural picture book.” This insistence on the simultaneous working of word and image (*Wort und Bild*) to foster a more engaged reading was made all the more imperative since Muthesius’ preferred mode of illustration in this case was

25 Ibid., p. 306.
26 M. Christine Boyer, *Le Corbusier, Homme de Lettres*, (New York: PAP, 2011), p. 70. By the time of the publication of his Etude, Boyer notes that Le Corbusier did not appear to be “as keen an advocate of classical forms as he seems to have been in his letter writing”, p. 92.
27 To my knowledge, no complete English translation of the volumes exists. Translations unless otherwise noted are mine. Hermann Muthesius, *Die englische Baukunst der Gegenwart: Beispiele neuer englischer Profanbauten* (Leipzig: Cosmos, 1900-1903), p. iv.
large format Collotypes—prints that as discussed in chapter one, could not be produced alongside text, and thus were added as addenda of loose plates. Nevertheless, despite its graphic incompatibility with the printed word, the collotype process created images that were faithful to the photographic negative because they did not suffer the distortions of halftone printing.

It follows then that the responsibility for a proper reception lay with the reader; Muthesius charged his audience with an activist agenda: to oscillate physically and visually between the written word and the photographic supplement, rather than to examine each format separately. Further, he wished for his readers to address the aesthetic and formal merits of the built within the image as well as the image of the built; while images were not play a subordinate role, they never operated autonomously as singular artifacts. It also points to larger theoretical considerations regarding the use value of photographs, but only if adopted correctly as pedagogical mediators alongside the written word.²⁸

The Collotypes were organized into four volumes, and each folio had accompanying texts, which provide basic histories and relevant characteristics of the chosen projects. These ‘explanations’ (Erklärung) were distinct from the labels on the plates (Texttafel), which merely identified the works, their dates of construction and their authors. (FIGURE 2.3) The explanations also incorporated

²⁸As I note in Chapter 1, this mandate was already evident in Fox Talbot’s The Pencil of Nature (1844–46).
plan drawings and the occasional halftone image, all of which were graphically integrated on the page. Plans constituted the third branch of a tripartite discursive methodology for Muthesius, and were to be read in tandem with the images and text. In many of his letters to architects requesting permission to publish their work, Muthesius made efforts when possible to obtain the original orthographic plan projections, insisting that, apart from the photographs, they were “just (as) interesting in architecture, and the fundamental of all (sic)...”29(FIGURE 2.4)

While project attribution was common, image attribution was not. Again, archival material by way of correspondence with photographers and editors sheds some light on the photographers. Many of the prints can be attributed to the London based Bedford Lemere & Co.(est. 1861), as well as to the Birmingham based Thomas Lewis (est. 1871).30 Lemere, and to a lesser degree Lewis, were prominent figures in the professionalization of architectural photography. Both catered primarily to a growing demand by practitioners and

30 The firm of Bedford Lemere should not be confused with the work of Francis Bedford (1816-1894)– also a well-known photographer who founded the Royal Photographic Society in 1853 and referred to in Chapter 1. Nor should it be confused with the Leeds based architect Francis Bedford (1866-1904). Bedford Lemere (1839-1911) established his company in 1861. His son Henry (also known as Harry) Bedford Lemere (1865-1944) joined the firm in 1881 and was one of its best-known photographers, as well as the principal figure behind the firm’s heyday. Much of the Bedford Lemere Collection is held by English Heritage. For more, see Nicholas Cooper, The Photography of Bedford Lemere & Co., (Swindon: The English Heritage, 2011). Relatively little is written on Thomas Lewis. Robert Elwall dates the founding of his practice to 1879. In Photography Takes Command, p. 45.
their clients who wanted to faithfully record their projects. They also offered their services to a growing number of periodicals and magazines, which publicized the increasingly central role architecture played amidst a larger aesthetic discourse that spanned fine and applied arts. Their relationship to their clients was reciprocal such that advertisements of their services were then published alongside articles that used their images.

They also relied on architects and building owners to refer their work to colleagues and peers. While Bedford Lemere was more established and his portfolio was more recognized, Lewis relied heavily on publicity and suffered more acutely from the lack of authorial recognition. He wrote pleadingly to Muthesius:

Please don't think me too troublesome – but do you think it would be possible to arrange with your publishers to have “FROM PHOTOGRAPH BY TH., LEWIS BIRM” put at front – the fact is I am proud of the results and I think it would perhaps do me a lot of good.31

Furthermore, it appears as if the publishers (in this case Cosmos Verlag) and not the photographers owned the rights to the images after publication.32 Despite these hurdles, early practitioners of this specialized market compensated by

---

31 Thomas Lewis undated letter to Hermann Muthesius (WBA).
32 See for example letter from Hermann Muthesius to Thomas Lewis, dated 26 October 1909 (WBA).
producing growing inventories of images from which catalogues were produced and made available to a wider public. As this practice became more established, firms divided their work into specific themes, and this fact also reflects Muthesius’ own categorization of work in The English Building Art of Today. Popular categories presented new and emerging building types such as department stores, government buildings, housing estates, and country houses. Since the architect’s interest was in contemporary building, more conventional subjects of architectural photography such as historic monuments and ecclesiastic structures were rarely illustrated.

Muthesius’ choice of photographers was self-serving; he favored those who reflected his interest in using the camera as a recording device – indeed as a product of industrialization whose true function lay in documentation and not in the rendering of artful, picturesque tableaux. This split in the nature of photographs reflected a split in their use. Further, I would argue that Muthesius’ subject matter and his use of photographs rehearsed his later interest in types. The consistence and uniformity of the reproductions reiterated his enthusiasm to present (through self-selection) English domestic architecture as a common language; the two in tandem then established both a formal and visual order.

As the noted photographic commentator Thomas Sutton wrote in 1854, the “poetry of photography” in its nascent years lay in capturing “great scenes or
artistic sites as a painter would select.”\textsuperscript{33} In contrast, the primary subject matter for firms that Muthesius privileged was “spic and span modern buildings.”\textsuperscript{34} By extension, Muthesius’ interest in all things directly allied with \textit{sachlich} design mirrored his advocacy for photography to render objective recordings. While not serving a subordinating role, photographs were to be viewed in a tandem reading with the text.

Further, the rhetoric of the modern was tied to the rhetoric of \textit{Sachlichkeit}: Muthesius was polemical in his advocacy of recent developments in building and not of a style, since in his view formal questions that wed themselves to stylistic concerns were obscured by an overemphasis on surface appearances. Rather, he considered them to be products of necessity and ‘pure’ elementary content. Similarly, Muthesius engaged photography not for its pictorial merit, but precisely for its apparent ability to disengage from media-driven authorship and thus served as an accurate illustrative type.

\textbf{The English House}

By the time of the publication of \textbf{The English House}, the comingling of photographs with text through the halftone printing process had become more


\textsuperscript{34} Ibid.
prevalent. Technological developments in photography succeeded in a radical alteration of reading and looking; the relationship between text and image - now seamlessly integrated - presented the possibility of both to read as equals on the page. The smaller format of the publications entailed less production costs than folio volumes and this fact in turn increased the possibility of larger print runs and wider distribution. It must be acknowledged that the history of the illustrated manual in architectural discourse is a long one; notable examples from the Renaissance period and later shared Muthesius’ practical and pedagogic aspirations to advance both universal and prototypical models for architectural production.

Nonetheless, Muthesius’ warning against the ‘pattern’ book persisted: in an uncanny foreshadowing of Walter Benjamin’s warning about photography decades later in his “Work of Art” essay, his preface to the first edition of the English House went even further; like its predecessor, this three-volume study was not to function as a “picture book.”

In fact, while Muthesius acknowledged that “a mass of illustrative material in English periodicals” had already reached German soil, he insisted that their

---

predominantly visual presentation without an “explanatory text” did not provide a full enough picture. He continued as follows:

The immensely greater ease with which the illustrations can now be produced brings its own hazards as does the projector at lectures: it may lure one into superficiality. Before all else this book is intended to be read.  

To further his point, Muthesius distinguished his books from more deliberately image driven publications that used text merely to structure the overall layout of the book to create a pleasing rhythm to the pages. In his letters to architects whose works were of interest to him, he often reiterated that unlike the earlier folio scale work, The English House volumes would adopt the halftone process and therefore be smaller in size and the images would reduce in size accordingly. Noting that the books were to be “chiefly descriptive,” Muthesius implicitly delineated the function of the words from the presumably evidentiary role of the images.

Here and in the earlier English Building Art of Today, Muthesius’ wish was to promulgate a critical reception that required the reader to make connections

36 Ibid.
37 In German, the sentence is “der text nur zum Umbruch der Bilder ist.” My interpretation is of the word ‘Umbruch.’ My thanks to Susanne Schindler for helping to clarify this phrasing.
38 See for example Muthesius’ letter to Lethaby, 28 August 1902 (WBA, letter box I, 263v).
between buildings as described in written form and as depicted in the images.

Again, Muthesius’ explicit pedagogical aim was to shift from imitation to translation, and as such, to transpose learned lessons from one cultural and geographic moment to another. Neither the text nor the images were to serve the role of support. Rather, together they formed the structure of the analysis.

Muthesius used photographs in a directed way – sometimes alone, and other times juxtaposed with plans. (FIGURE 2.5-2.7) While lithographs still made an occasional appearance, one could argue that his repeated deployment of the other two illustrative forms complemented his overall progressive polemical strategy to present English architecture to a German language audience. Exterior images predominated Volume I, which was dedicated to the building type, while Volume II and III addressed site conditions and interiors. Ultimately, he appeared to favor exterior over interior views, since the latter often suffered in the author’s estimation from an abundance of furnishing and a lack of daylight. From our vantage point, these preoccupations read as quintessentially modernist, and the particular meteorological predisposition of the English countryside could not be any less conducive. A letter by Thomas Lewis – the primary author of the English House photographs – addressed Muthesius’ “rules as to the lighting of his subjects at hand”:
Dear Sir,

I am in receipt of your favour, the rules...have been answered by me for many years. The absolute necessity for Sun (sic) however increases very considerably...the time that it may take, e.g. I might have to stay a week perhaps and get no sun even then. Of course I know how every desirable it is to have the Sun! In order to get the brilliance but can we always afford to wait?

The status of camera lenses in this period was such that images could never be ‘captured’ in an instant, but rather required longer exposure times. The “brilliance” to which Lewis referred implied that Muthesius required the images to have greater contrast. Likewise, Muthesius made clear his wish for examples to be depicted such that the exterior walls could be clearly delineated without the presence of shadows, clouds and other painterly chiaroscuro, and only with direct lighting conditions could a tonal uniformity be achieved. In another letter, Muthesius clarified his point further. By way of an explanation as to why certain houses had to be re-shot, he wrote: “the contour of the houses in some parts is quite effaced by the clouds. I rather want the body of the buildings quite sharply

39 Hermann Muthesius letter to Thomas Lewis, 18 December 1902 (WBA, letter box I 261v, 360, 361v, 362).
40 Hermann Muthesius letter to Thomas Lewis, 18 December 1902 (WBA, 360, 361v, 362).
41 Hermann Muthesius letter to Thomas Lewis, 21 August 1902. See also letter dated 1 January 1903 (WBA 377-378v).
marked.”

As for furnishings, Muthesius’ disdain for them ranged from their quantity, to their quality and their layout in the room. This issue appears to have come to a head with the houses of Edwin Lutyens. In a letter from the 26th of August 1902, Muthesius requested images for no less than five of the architect’s oeuvre, culminating in the procurement of fourteen plan drawings and photographs. As was often the case, Muthesius wanted both interior and exterior views, but “with regard to the latter…the owners of (these) fine houses put their common place furniture in so that the effect of a room as a whole is spoilt.” It comes as little surprise then that of the numerous illustrations, only two interior views were utilized and they depicted spaces with the least amount of clutter. (FIGURE 2.8) The point was reiterated in a letter to another architect Edward Schroeder Prior, whose project in Devon was illustrated with one exterior view and two plans, but no interior views, since the latter would not be used unless “the furniture is in harmony with the house.”

______________________________

42 Hermann Muthesius letter to Thomas Lewis, 18 December 1902 (WBA, 360, 361v, 362).
43 The Lutyens projects Muthesius chose were the Home for Sailors (Volume I, illustration 187), Munstead Wood (Volume II, illustrations 169-173), The Orchards (Volume I, illustrations 182-186), Overstand Hall (Volume II illustrations 78-79), and Sonning (Volume II, illustration 38).
44 Hermann Muthesius letter to Edwin Lutyens, 26 August 1902 (WBA letter box I, 271, 272v).
These photographs of architecture were appropriated solely for the purpose of publication, and as such image and text in tandem propelled a unified message of *Sachlichkeit* that designated tectonic, visual, and cultural principles. The choice of photography over labor-intensive models or printmaking, and the *sachlich* nature of the images themselves complemented this attitude.

In fact, Muthesius’ concerns for high quality design imbued with a sense of “purposefulness” were in keeping with his demands for the photography of architecture: just as he advocated suitability and conciseness in buildings devoid of tacked on decoration, he demanded from his photographers a clarity and integrity in image production to mirror these claims.46

Muthesius utilized these specifically commissioned photographs in a polemical way to present English Aestheticism as a precursor to progressive movements in Germany, and yet his keen publicist eye was not cultivated in isolation. Further, Muthesius’ dependence on his photographers for source material previously unknown to him also calls into question the ultimate level of control he held with respect to the content of his books.

Again, in his numerous letters with photographers and editors,47 the author’s decisions were not limited to projects that he himself had visited; at

---

46 Thomas Lewis, letter to Hermann Muthesius, 4 September 1902 (WBA).
47 These included Raymond Giesecke, Ernst Wasmuth, Wilhelm Ernst and Julius Meier-Graefe to name a few.
times, Muthesius relied on his photographers to introduce him to new projects, and photographers who were eager to get their work published suggested examples of what they perceived as “mostly modern domestic architecture,” from which Muthesius compiled his collection.48

For example, in a letter to architect Detmar Blow, Muthesius requested a plan drawing for his design of Happisburgh Manor: “the photograph … taken by Mr. Lewis of Birmingham … would do splendidly. But I should also like very much to include a plan, which I think must be very interesting according to the shape of the house shown by the photograph.”49 No plan was reproduced in The English House, thus it is unclear whether Blow obliged Muthesius or not.50 However, the power of the photograph to shape Muthesius’ opinion of the formal merits of the project cannot be overlooked. Likewise in the case of his friends like Lethaby, Muthesius’ familiarity with his work is left to speculation.

Reminding Lethaby that his Eagle Insurance Building in Birmingham had been used in The English Building Art of Today, Muthesius wrote him again to ask for reproduction rights for his house at 4 Oaks, images of which he had seen at Lewis’ studio. Muthesius included an exterior view of the project in Volume II

48 Thomas Lewis, letter to Hermann Muthesius, 4 September 1902 (WBA).
50 Happisburgh Manor is illustrated by one exterior view. The English House, Volume II, illustration 225, p. 207.
and wrote, “the best houses are often those, which, in the eyes of continental Europeans, have ‘nothing to them.’”\textsuperscript{51} The photograph reiterated this position. An evenly lit cloudless sky provided the backdrop for the house shot at a slight incline and at an angle, articulating at once the building envelope and its volumetric contours: “Within its world of restrained forms…are its subtle restraint, its reserve and delightful honesty.”\textsuperscript{52}(FIGURE 2.9)

Further, amidst an environment of increasing competition over the access and dissemination of illustrative material via the burgeoning milieu of illustrated journals, authors insisted on previously unpublished images or otherwise for new ‘views’ not found elsewhere. This factor further complicated the story of photography in this context, whereby its relays with producers, users and readers became more attenuated. It also problematizes Muthesius’ removed stance relative to the subject matter.

Nonetheless, it is clear that Muthesius exerted his influence over the aesthetic merits of the images – to the extent that he could. For example, unlike his predecessor Constantin Uhde (author of the Wasmuth publication of 1894 \textit{The Monuments of Great Britain and Ireland}), he did not utilize images by Charles Latham, a member of the Royal Photographic Society and in-house photographer for \textit{Country Life} magazine. Besides his interest in using previously

\textsuperscript{51} \textit{The English House}, Volume II, p. 170.
\textsuperscript{52} Ibid.
unpublished material and utilizing new views, stylistically one could assume that Muthesius viewed them as too artistic, and therefore inappropriate as *sachlich* typological markers.

His demand for the “absolute necessity for sun” was also not always met. Yet, discussions of weather in the English countryside aside, Muthesius’ concern for visual and graphic clarity added to debates at the time between documentary and pictorial or art photography. Muthesius’ preference for ‘straight’ photographs performed the *sachlich* message of the text, namely his assertion for the “absolute and essential” need for a Building-Art stripped of ornamental excess, and rather illustrative of pure functionality and practicality.

In *The English House* and other publications from this period, Muthesius’ views on *Sachlichkeit* were positioned alongside a formal and compositional analysis of the projects, and intermingled with photographs and plans. For example, returning to his discussion of Lutyens and his Munstead Wood project, Muthesius carefully parsed the word “modern” by distinguishing its continental variant, a “grimly determined modern style” defined by “superficial extras,” from the English house, which rather embodied a sense of the modern in its “implementation of a frame of mind, which … most comprehensively reflects

53 Thomas Lewis letter to Hermann Muthesius, 15 March 1901 (WBA).
modern life and its sensibilities." Presaging Adolf Loos’ particular brand of architectural dandyism, he continued: “both in his dress and in the appearance of his house, the Englishman’s guiding principle is not to attract attention. Just as is customary for men in England not to wear rings…so he demands that his house avoids every kind of display.”

In its most comprehensive reading, the multivalent delineations of Sachlichkeit conveyed by Muthesius undermined the subsequent historiography of the Modern Movement that followed a single line of descent from William Morris to Walter Gropius. Indeed, a study of photography in the books of Hermann Muthesius reveals the disciplinary anxieties of an emergent modernism well in advance of more codified case studies from the 1920’s and beyond.

I conclude by way of a return to the title of this chapter. In Greek architecture, tekton referred to elements assembled piece by piece, such as carpentry, while stereotomy dealt with elements that were cut or carved such as

55 Ibid.
56 Ibid. This explicitly gendered description casts a curious shadow and yet another potentially contradictory reading of sachlich as purely ‘objective.’
masonry. *Tekton* was also related to *techne*, which referred to artistic skill or craft.

The use of the word ‘tectonic’ is ubiquitous in architectural discourse. One dominant strand of the term’s adoption into architectural literature derives from Gottfried Semper’s *Four Elements of Architecture*, wherein he articulated mass (volume), frame (structure), plane (surface), and hearth (spatial center). All four elements were wedded to specific building operations: cutting, joining, wrapping, folding, superimposition etc. Semper’s analysis of tectonics differed from Karl Bötticher, for whom the manipulation of masonry (stereotomy) was the exclusive vehicle for expressing spatial orders. Semper on the other hand articulated a more nuanced understanding of the term by disassociating the notion of volume from structure and surface.

More recently, Kenneth Frampton has allied the word “tectonic” with the term “culture.” By bringing the two terms together, Frampton argues in part that the real physical character of building (as a thing and not just as an image) contributes to an understanding of the cultural milieu within which the object was constructed. Beyond the architectural delineations of mass plane and frame, the physical reality of buildings informed the way in which they were experienced. Frampton’s assertion on behalf of the materiality of architecture, along with his argument for the relevance of the means of making within a broader cultural
context, underscores the fact that architectural tectonics is firmly rooted in local or vernacular craft traditions.

If one were to define tectonic more broadly as the negotiation between a structural system and the deployment of a material language and within Sachlichkeit’s web of meanings, can one understand photography as the representational ally to the drive from architecture as style to architecture as the art of building? Is the rhetorical shift from Stilarchitektur to Baukunst a tectonic one, not unlike the evolution of hand to mechanized reproduction?

Muthesius’ materialist approach understood photographs as objects as much among others, and acknowledged their thinness as outcomes of a projected surface (and thus the need for a closer reading), and at the same time understood them intrinsically from a positivist stance, as a product of emerging technologies, indeed as an outcome of a particular cultural Zeitgeist. It follows that Muthesius used photography not as a stylistic vehicle for conveying his ideas on architecture. Rather, he implicitly defended its potential as a physical document (a Sachforme) to render its subjects truthfully. Muthesius treated photography ontologically as he would other materials, namely according to their “nature,” and as such, a notion of tectonic realism extended to photography, and was akin to Frampton’s linkage of tectonics to indigenous culture.
Finally, while Muthesius used photography at the turn of the century to establish a polemically modernist position towards architecture and the design industry at large, his stance was elaborated and complicated upon his return to Germany. Through the founding of the Werkbund in 1907, to the subsequent staging of numerous image centered exhibitions and annual yearbooks, to its congress in Cologne in 1914, that institution developed a new set of terms in architectural discourse by which to evaluate the radical political and economic shifts in Germany at the time. In part, the founding members of the Werkbund like Muthesius argued for the need to define particularly German responses to recent and ongoing technological and industrial advancements. This response was tested via the organization’s multi-faceted aesthetic and philosophical project, which was initially fueled by a reaction against the perceived lack of formal discipline and material restraint of the Jugendstil movement, and an attempt to renew and reposition the notion of an authentic German style. This renewal had as its purpose the re-centering of artistic practice away from the allures of Civilization and around Kultur.\(^58\)

Muthesius continued to use the term Sachlichkeit in his Werkbund era writings, but in the period around the founding of that organization, he also used other key words like Forme and Typ to define the unity of German architecture.

culture, and by extension the disciplining of building. As in his earlier books and essays, Muthesius’ arguments aligned these terms with visual and tectonic properties. These properties, however, were directed towards specifically technological and physical purposes. *Forme* designated both generative (‘take shape’) and fixed forms (‘model’), and also served as a structure that produced yet other forms (‘mold’).\(^59\)

In his “Aims of the Werkbund” (1911), Muthesius referred to the necessity for architecture’s “recovery of form.”\(^60\) Muthesius aligned his use of the word *Forme* with a “higher spiritual need” above materials and techniques, and also evoked a sense of improved quality in production. The codification of a formal language and syntax was presented as a way to organize and strengthen the role of industry within the design sector; it was also meant as an ordering device to combat the “formlessness” (thus debasement) of culture.\(^61\)

At the end of Muthesius’ “Aims,” *Forme* took a turn to the biological: ‘crude’ form was analogized to bodily discomforts caused by “dirt and a bad

---

\(^59\) As cited in the Langenscheidt Standard German-English English-German Dictionary (Berlin: Langenscheidt, 1993): “Forme *f* (-; -en)1. Form (a. ling., phys., a. fig.), shape (a. fig.): ling. aktive (passive)~active (passive) voice; in~von (or gen) in the form of; to keep up appearances; die~wahren observe the proprieties; fig. (greifbare) ~(en) annehmen take shape. 2. (technology) a) model, b) mo(u)ld, c) die 3. A) cake tin, b) pastry cutter. 4. Esp. sports: form, condition: in (guter) ~ in good form (or shape)…”


\(^61\) Muthesius, “Aims…,” p. 27.
smell.” The dictionary reminds us that *Forme* also bears a sense of propriety—much like “clean linen” industry and culture must be tempered by rules, which govern both efficiency and hygiene. Muthesius’ address of 1914 extended his ideas of *Forme* to what idealist philosopher Karl Joël hailed as an “organic” vision of production. In *Neue Weltkultur* (1915) Joël predicted the imminent victory of *Kultur* over the mechanistic civilization of the West and praised the Werkbund’s “organicizing of the machine” for re-introducing the concept of ‘genius,’ and for balancing it with the technical requirements of standardization. In fact, he predicted that this “unity in diversity,” would yield a higher idealism. Using Joël’s words, Muthesius’ notion of an “organic vision” concretized and complicated his earlier claims to the *Forme* of culture and industry with the introduction of the concept of “typification” (*Typisierung*).

In his essay on the subject, Anthony Vidler presents the ambiguities of the term since its first usage. Initially endowed with a religious connotation, architects and thinkers by the end of the eighteenth century used type to

62 Ibid.
designate the systematization and codification of the French orders. This disciplining of nature attempted to set normative standards by which one could not only identify inner structure, but outer character as well. As in the writings of Quatremère de Quincy, idealist notions about the purity of ideal form never were measured against the more pragmatic requirements of building.66

Muthesius’ writings on the subject also bore the traces of a similar conflict between ideas of type as constitutive of an internal logic to the object and that object’s outward expression, as an autonomous, individual entity. This conflict, too, attempted to align more spirit-driven idealist notions about the purity of form with the overarching needs of society. But not all the members of the Werkbund were in agreement about the terms of the debate. In his now well-known address of 1914, Muthesius’ use of the word Typisierung sparked controversy, due in part to the inherent and problematic ambiguities of the word.67

Muthesius’ insistence on the need to develop universal form through its standardization was both an aesthetic and economic plea. The cooperation with industry endowed the production of applied art and architecture with an

66 Ibid., p. 105. It is also interesting to note how the need for the establishment of rules was also reflected in the ‘disciplining’ of architectural drawing.
“ennobling” quality, while also facilitating exports of goods abroad. Some historians have argued that his melding of “large scale business concerns with reliable good taste,” was an intentional maneuver in order to conceive a modern notion of vernacular rooted both in German soil and industry. In this regard, collectivity occurred on two levels: both in the anonymous developments of modern society, and in the promotion of a distinctly German unity of culture. Similarly, the confusion of scale between the individual Typ and the collective Typisierung produced objects that were both intrinsic to the object and extrinsic to it; while the former related to an internal structural logic of the object, the latter referred to its impact on society.

What is now characterized by contemporary sources as the famous “split between type and individuality,” the debate between Muthesius and Henry Van de Velde occurred not just at the level of formal and stylistic developments. It also specifically targeted the distinctions - theoretical and otherwise- between collective and mechanized artistic production, and the ‘free’ and spontaneous creation of the individual artist. For Van de Velde, questions of a “new” style had to precede the establishment of modes of Typisierung as a matter of aesthetic

69 Ibid., p. 29.
priority. While Van de Velde embraced the use of technology, he saw it at the service of sustaining notions of craft and individualism. The individual artists’ first priority was to develop “the physiognomy of the new style” by first catering to the wealthy connoisseur, who would serve as quality controller.⁷¹ As Frederic Schwartz notes, “The idea of the type grew out of the project of finding an economic solution to a cultural problem; its name resulted from the attempt to translate the result back into the language of culture.” ⁷²

Fig. 2.1 Hermann Muthesius in Hammersmith. Published in Stefan Muthesius. Das Englische Vorbild: eine Studie zu der deutsche Reformsbewegungen in Architektur, Wohnbau und Kunstgewerbe im Spätern 19 Jahrhundert, Munich: Prestel, 1974.
Fig. 2.2 Hermann Muthesius, title page, *Das Englische Haus*. Berlin: Wasmuth, 1904-1905.
Fig. 2.3 Example of Collotype plate of houses at Cadogan Gardens, London, designed by F.G. Knight. In Hermann Muthesius, Die englische Baukunst der Gegenwart: Beispiele neuer englischer Profanbauten. Leipzig: Cosmos, 1900-1903.
Fig. 2.4 Example of plan layout embedded in text, a house in Hampstead by Norman Shaw. In Hermann Muthesius, Die englische Baukunst der Gegenwart: Beispiele neuer englischer Profanbauten. Leipzig: Cosmos, 1900-1903, p. 47.
Fig. 2.6

Das englische Haus. pp. 132-133.
Fig. 2.7 Double page spread illustrating plans and photographs of houses in Bedford Park by Norman Shaw in Hermann Muthesius, Das englische Haus, pp. 134-135.
Fig. 2.8 Double page spread illustrating two interior views of The Orchards in Surrey by E.L. Lutyens, in Hermann Muthesius, Das englische Haus, pp.194-195.

Die folgende Betrachtung des Aufbaues in seinen beiden Hauptteilen, der Wand und dem Dache, wird dies im einzelnen noch näher bekunden.

170

Fig. 2.9 Exterior view of Four Oaks, by W.R. Lethaby, in Hermann Muthesius, Das englische Haus. Volume II, p. 170.
Chapter Three: The Image and the Archive: The Werkbund, Deutsches Museum, and the Migratory Image

“This is a travelling museum,” wrote the young Le Charles Edouard Jeanneret in 1912 for his little known study of the German Decorative Arts movement.\(^1\) (FIGURE 3.1-3.2) The museum to which he referred was the Werkbund sponsored *Deutsches Museum Für Kunst in Handel und Gewerbe* (German Museum of Art in Trade and Commerce), established in 1909 under the direction of Karl Ernst Osthaus.

In chapter three, I address the multi-pronged role played by the Deutsches Museum. As an intra-organizational pedagogical resource, an archive, and propagandist centerpiece of a new cultural movement, it showcased objects of all scales, serving both the public in Germany and abroad with ‘taste training.’\(^2\) Taste training required a new mass medium: travelling exhibitions. I also evaluate the role of the German Werkbund founding members (including Walter Gropius and Osthaus) in propagating the interests of the organization through its annual yearbooks. With the inauguration of this alliance of architecture, applied

---


arts and industry, an extensive and growing network was forged and fostered among designers, craftsmen and businesses. This network created the structure needed to assemble a collection of worthy products by its members as well as the dissemination of new ideas through publication. There was a spiritual and economic impetus for a new organization. As early as 1906, Osthaus had envisioned the need for an entity that could foster taste within the framework of modern mass production.

In an introduction to an exhibition catalogue compiled by Osthaus’ Folkwang Museum (est. 1902) for the so-called Hagen room installed at the 1906 applied art exhibition in Dresden, he noted that industrial growth had the potential to enhance the cultural value of an artist’s work. To this end, Osthaus proposed the concept of a new museum - a “school of new taste” as he described it - at the 1909 annual meeting of the Werkbund in Frankfurt. The Deutsches Museum (FIGURE 3.3) was formed in large part to collect and house applied arts created by the leading members of the Werkbund, and to assume control of the organization’s publicity efforts. This new museum was virtual in the

---

3 For more on the circumstances around the founding of the Folkwang Museum, see Birgit Schulte, “Karl Ernst Osthaus, Folkwang and the ‘Hagener Impuls’ – Transcending the Walls of the museum” in the Journal of the History of Collections, vol. 21 no. 2 (2009), pp. 213-220.
sense that it had no public face but rather was embedded within Osthaus’ Folkwang Museum, and which also held his impressive personal collection of modern and applied art.

As Jeanneret noted, it was Osthaus’ desire to compile a vast and often disparate collection, which reflected the production of the newly established German Werkbund in order to “develop some sort of mechanism for publicity, for education and for information.”6 The museum achieved this aim, he added (presumably citing Osthaus himself in bold letters), by disseminating knowledge of these objects through their exhibition – thereby “to allow the image of our age to assert itself more strongly.”7 Le Corbusier’s use of the word “image” in this context is important because he was referring not only to the itinerancy of the objects on temporary display, but more importantly for this study, photographs of architecture.

Indeed, with the Deutsches Museum, Osthaus enacted an organization that fostered a new popularization of the visual and spatial arts through the dissemination of objects and images. In so doing, he also extended the work already begun by Muthesius. The marriage of the Werkbund’s alliances and

---

7 Ibid. As Jean-Louis Cohen notes, le Corbusier’s relationship to Osthaus was an important one, as evidenced by their correspondence and the former’s visit to Hagen to see the Folkwang Museum and Osthaus’ house designed Henry van de Velde. Jean-Louis Cohen, France ou Allemagne? Un Livre in écrit de le Corbusier, (Paris: Éditions de la Maison des Sciences de l’Homme, 2008), pp. 23-27.
membership with the Deutsches Museum’s mandate to collect and display
created a powerful front. The effectiveness of this union relied on the success of
its strategic engagements with both consumers and producers, which in turn
required the formation of a new museological model: a “nomadic”\(^8\) enterprise that
could effectively reach the general public by bringing the new to them. Largely
curated by Osthaus himself, the objects were intended to circulate in “permanent
freedom,”\(^9\) in order to facilitate “constant education”\(^{10}\) and thus serve as a “taste
regulating factor”\(^11\) on a mass scale.

In its annual report of 1911/1912, members of the museum’s board of
directors that were listed present at the meeting included Osthaus’ closest friends
and allies at the Werkbund, Peter Behrens and Henry Van de Velde. It would
come as no surprise then, that their work would be the centerpieces of any future
exhibitions. Because of his seniority and rank within the Werkbund, Muthesius
was also included but his role was limited to artistic advisor. Finally, the young
Walter Gropius was present at the meeting and listed as a freelance staff
member.\(^{12}\)

---

\(^8\) Karl Ernst Ostahus, “Grundung eines deutschen Museums in Handel und Gewerbe in Hagen,” in *Hagener Zeitung* #184 (August 9 1909), p. 3.

\(^9\) Ibid.


\(^{11}\) Ibid.

stake in the success of this new museum venture and in gathering material, thereby subsidizing it with 1000 Marks per year.13

Franz Stoedtner and the Fotografien-und-Diapositivzentrale

Soon after the founding of the Deutsches Museum, it became clear to Osthaus that in order to most effectively showcase the work in the collection and make it available to a mass audience, he needed to mobilize the relatively new discipline of architectural photography. Primordially bound to gravity, examples of newly built work had to be telegraphed via their reproduction, and given that architecture was arguably the linchpin of the new movement, the choice to deploy photography as the most effective medium of documentation is logical. Osthaus also used photography to document those works that were not available to the museum in their original form, such as large-scale sculpture, furniture and lighting.

To this end, Osthaus made initial arrangements with Dusseldorf-based photographer Erwin Quedenfeldt.14 Since the photographer had done work for him in the past, and since he was in close proximity to Hagen, Osthaus entrusted

Quedenfeldt with the job. But in a move that typified the tensions between some of the leadership of the Werkbund and Osthaus, the latter was ultimately forced to reject Quedenfeldt in favor of Berlin based photographer Franz Stoedtner. It was a strategic move on the part of both the Werkbund and Osthaus, since Berlin was also its headquarters and the home of most of its members. As part of the Werkbund’s centralization of its own promotional and advertising efforts by its propaganda and illustration center (*Propaganda-und-Illustrations Zentrallle*)\(^{15}\), it relied on submissions of examples from its members. Since no one photographer was contracted to the center, it failed due to the increasing demand for new images.\(^{16}\)

Under Osthaus’ leadership, images were commissioned and taken by Stoedtner, or one of his staff members,\(^{17}\) and helped establish a visual archive within an archive - images that were integrated with the museum’s collection of objects. Osthaus maintained control over the content of the of the images by personally commissioning which projects to document, and a museum representative always accompanied Stoedtner.\(^{18}\)

\(^{15}\) *Bericht Des Deutschen Museums Für Kunst in Handel und Gewerbe Hagen i.W. RechnungsJahr 1910/11*, Newark Museum, John Cotton Dana Papers, Exhibit Files Box 3.

\(^{16}\) “Propaganda für ein Neues Bauen,” p.9.

\(^{17}\) Other known contributors were the photographer Rudolf Lambeck, and a man known only as Klein. See Röder, p. 10.

\(^{18}\) Ibid.
A child of three parents – the Deutsches Museum, the Werkbund and the photographer’s already existing *Institüt für wissenschaftliche Projection* (FIGURE 3.4) - this archive embedded within the museum’s larger collection of art and artifacts became a multi stranded image data bank and marketing center for both architects and the general public. At once a pedagogical resource and interface with the consumer, it provided images for exhibits, lectures, and academic purposes. Osthaus required Stoedtner to produce 18x24 cm prints (or slides) that could be purchased or borrowed.\(^{19}\) Thematically organized catalogs were organized, printed and displayed at all Werkbund related locations. As a further example of Osthaus’ curatorial control, Stoedtner was required to use specifically designed letterhead designed by Lucien Bernhard, which incorporated Peter Behrens’ “Antiqua” typeface.\(^{20}\) Most projects were documented with one image of the overall exterior view, while others were documented in series.

The collaboration between Osthaus and Stoedtner was difficult and at times contentious, which contributed in part to the organization’s most productive period spanning only from 1910 – 1913. These difficulties also account for the lack of examples after 1913, such that many of the photographs exhibited at the Cologne 1914 expo were the last to be produced, or were re-prints from earlier

\(^{19}\) Ibid. The rental fee for the slides was 20 Pfenning per week, and a fee of 1 Mark was charged for the print on matte paper. The matte surface was a also a requirement from Osthaus.

\(^{20}\) Ibid.
negatives.21 The scope of the collection focused first on German examples, followed by Holland and Denmark, and in subsequent years by Italy, Austria and Poland. Existing collections such as the “Moderne Baukunst” would be expanded upon.22 The relationship between Gropius and Stoedtner was even more volatile, and Osthaus was often obliged to play the role of mediator. Gropius’ frustration was due, in large part, to Stoedtner’s management of the image archive. Images were often misplaced and unaccounted for. There were even threats of legal action against Stoedtner by Gropius and Osthaus on the basis of missing images that the former believed belonged to him.23 Stoedtner’s refusal to travel to Hagen exacerbated the volume of increasingly confrontational correspondence, but reproduction rights were a constant concern for Osthaus, and in particular for Gropius.24

In addition to his own catalogs (FIGURE 3.5), Stoedtner was contracted by the museum to organize and maintain a photograph and slide archive. The collection would be available to members for lending purposes, who in turn utilized the images in their own lantern slide shows and for pedagogic purposes.

21 Röder, pp. 7-8 footnote 16.
23 Letter exchange between Osthaus and Gropius, KEO-Archiv (Kü 324/1, Kü 324/12, Kü 324/15-16, Kü 324/17, Kü 324/18-19, Kü 324/20-22, Kü 324/26-27). Gropius’ letters with Stoedtner continued well into the 1930’s. See for example a letter from Gropius to Stoedtner, 12 December 1934 (BHA).
24 Letters between Osthaus and Stoedtner from 1910 elucidate these issues. KEO Archiv (v.267b/300)
The collection was indexed and made available in series according to categories set by Stoedtner including "Modern Buildings," "Residential Buildings," "Industrial Buildings," "window displays," and "Department Stores." These catalogues (also called ‘sample books’ or Auswahlbände) for the Center were similarly organized as boards with pasted contact images and assigned inventory numbers that could be borrowed for up to 14 days (FIGURES 3.6-3.7). Since most of the photographs were utilized principally for educational purposes, they had a built-in narrative logic that corresponded to reference manuals in the case of the technical albums, and chronological surveys in the case of the art historical and architectural albums.

The Werkbund Yearbooks

The Werkbund was instrumental in the development of modern industrial architecture in Germany and one of the means it used to achieve this was photography. Indeed, Germany was racing. By the time of Lethaby’s words a decade after Muthesius’ return to Germany, the harnessing of photography’s pedagogical and propagandist powers was evident in numerous illustrated journals and periodicals, which, while initially inspired by their English

predecessors, quickly surpassed them in quality and quantity. These publishing developments were complemented by the Werkbund’s national and international media campaigns, of which Muthesius was a founder and chief architect.

Whether through their discursive juxtaposition with texts or in their positioning as objects among others on display, photographs became both the vehicles for the consumption of new objects and stand-ins for the dissemination of architectural ideas and production. This still relatively new medium was used almost exclusively over more traditional types of illustration as a way of unifying an otherwise eclectic survey of new production. Nevertheless, the banal uniformity of the images could not disguise the disciplinary anxieties of this emergent proto-modernist movement whose multiplicity of at times competing agendas of the Werkbund members dominated the moment of its visibility in the discourse.

In the highly influential series of yearbooks, everyday household products as well as buildings of all scales were codified through their literal and photographic repetition in a straight quasi-scientific manner, displaying the fruits of new co-operations between architecture, the applied arts, and industry. Debates over the new architecture engaged a surge in self-promotional material (of which the yearbooks were a part) that coincided with an interest in displaying objects of everyday life alongside examples of good architecture produced by
Werkbund members. The photographs in the yearbooks were central to the propagation of these debates.

In the yearbook of 1912, Osthaus' assistant and Deutsches Museum representative Fritz Meyer-Schönbrunn described the scope of the archive by announcing the center's documentation efforts to acquire photographs of the "most important modern buildings" by Werkbund founders Peter Behrens and Hermann Muthesius, as well as August Endell and examples from Denmark and the Netherlands. The fruits of these efforts were printed in the catalog of the 1910 Brussels World Fair.\(^{26}\) Despite formal and ideological differences on the part of the architects and their projects, the deployment of 'straight' photography constructed a seamless unity of disparate voices. Other than the Brussels catalog and the \textit{Moderne Baukunst} collection, only two other catalogs were produced - one entitled "Hagen I: Modern Architecture," and "Hagen II: Museum Folkwang." Not surprisingly, the projects in Hagen were those commissioned by Osthaus, while the second documented the larger holdings of the Folkwang.\(^{27}\)

In the yearbook of 1913, photographs were meant to further the stated agenda on the part of the editors, namely to promote the development of \textit{Kunst in Industrie}, or "Art in Industry." While certain projects were chosen over others (again, Peter Behren's work dominated) the aim nonetheless was to celebrate the depth and breadth of recent

\(^{26}\) Yearbook of the German Werkbund, (Jena: Eugen Diederichs, 1912), p. 98.
\(^{27}\) Röder, p. 12.
German architecture. Photographs of Gropius’ Fagus factory (a project that is the focus of the next chapter) numbered five in total – three exterior views and two interior views. (FIGURE 3.8) While they appeared in the same issue of the yearbook as Gropius’ seminal “Entwicklung” essay, a direct connection between the images and that text was not made. Rather, the illustrations in Gropius’ essay focused on foreign examples of factories namely in North America, (FIGURE 3.9), while the Fagus images presented in an appendix alongside their German contemporaries Behrens and Poelzig, and intermingled with other building types, interiors, shop windows and graphic design. This relatively democratic use of photography reflected its main functional priority in the pre-war years: that is, to provide an overview (Einblick).\textsuperscript{28} The time had not yet come for a close up.

No doubt in part due to the widely accepted use of photography and amidst an atmosphere of growing cultural exchange, Osthaus’ spearheaded an ambitious exhibition campaign on behalf of the Deutsches Museum (and also indirectly the Werkbund), to broaden the scope of collection’s influence. The exhibitions became leitmotifs for at once a new cultural movement that showcased objects of applied arts alongside images of architecture, and served the public both in Germany and abroad in providing privileged models for new formal solutions to aesthetic concerns. Photographs from the Center were

\textsuperscript{28} Ibid.
utilized to present developments in recent German architecture and toured under the heading *Moderne Baukunst*. Walter Gropius’ coordination and development of an image data bank dedicated to industrial building from Europe and North America was shown separately as *Industriebauten*. Finally, a series of exhibitions held in the United States in 1912-1913 under the title “Touring Exhibition,” incorporated some of the images from the *Moderne Baukunst* shows, whose specific focus was photographs of architecture.

*Moderne Baukunst 1910-1914*

As early as 1906, Osthaus had conceived of a mobile showcase of goods and artifacts that could be exhibited in unconventional venues such as ships and train stations. Inspired by the new shop window designs appearing in many German cities (what he termed “street museums”), this new exhibition model would take advantage of the increased tempo of modern “traffic conditions,” *(Verkehrsverhältnisse)*, which, coupled with the increased mobility of the modern city dweller, encouraged a new mode of visual consumption and cultural exchange. In fact, the modern shop window and the model of the itinerant museum went hand in hand; both in Osthaus’s view contributed to a more

---

efficient and wide-ranging “registering of taste.”\textsuperscript{30}

By 1910, Osthaus and Gropius had amassed significant collections of photographs that were used as supplements to Stoedtner’s growing catalogs.\textsuperscript{31} *Moderne Baukunst* was co-sponsored by the Werkbund and installed throughout Europe and the United States between 1910-1914 as part of a larger showcase of German applied arts.\textsuperscript{32} The first iteration of the exhibition was staged between May 5 and June 7, 1911, and coincided with the International Exhibition of Architecture and Applied Arts in Lutlich.\textsuperscript{33} Photographs were printed in identical sizes of 40x50 cm, and then mounted on 60x70 cm boards. Again, the content of the exhibition reflected Osthaus’ subjective attitude towards what he viewed as representative modern Building-Art. Unlike Stoedtner’s more expansive inventory of images, the choices for the *Moderne Baukunst* exhibition were exclusively German, and almost all of the projects were conceived and executed by Werkbund members.

\textsuperscript{30} Ibid., p. 45. My translation.
\textsuperscript{32} Aside from examples from the museum’s “advertising art” (*Reklamekunst*) collection, *Moderne Baukunst* proved to be the most successful of all the touring exhibitions. Sabine Röder, “*Moderne Baukunst,*” in Michael Fehr et al, *Das Schöne in der Alltag – Deutsches Museum für Kunst in Handel und Gewerbe* (Gent: Snoeck-Ducaju & Zoon, 1997), p.32.
\textsuperscript{33} *Bericht Des Deutschen Museums Für Kunst in Handel und Gewerbe Hagen i.W. RechnungsJahr 1910/11*, Newark Museum, John Cotton Dana Papers Exhibit Files Box 3. See also KEO Archiv DWB 75/15.
The choice to limit the exhibition to German examples conveyed the more targeted function of the travelling exhibitions within the Illustration Center’s growing archive: while the latter’s inventory of images was an extensive resource for international work, the foreign exhibitions had the explicit propagandist mission of promoting the leading role that Germany had taken in “taste training.”

Another exhibition that compiled a subset of the Center’s archive was entitled *Industriebauten* and staged throughout Germany between 1911 and 1912, a direct predecessor of which was a showcase of “artistically valuable factory building from ancient and modern times” compiled by Wilhelm Franz – a Werkbund member and professor at the Technical University in Berlin – in 1909. *Industriebauten* included some of the same projects along with other examples from the Center’s collection of photographs, which were chosen by Gropius in consultation with Osthaus. The latter’s wish was to form an

---

34 *Prospekt Des Deutschen Museums Für Kunst in Handel und Gewerbe Hagen i.W. RechnungsJahr 1911/12*, Newark Museum, and John Cotton Dana Papers Exhibit Files Box 3. Examples by Behrens, Endell, Hoffmann, Messel, Muthesius, Riemerschmid, Van de Velde. The installation required 50 meters of wall area. My translation.


independent exhibition\textsuperscript{38} that would distinguish itself from the \textit{Moderne Baukunst} content and offer Gropius a curatorial opportunity apart from Franz’ efforts. After the show’s premier in October of 1911 at the Chamber of Commerce in Görlitz,\textsuperscript{39} Muthesius also expressed interest in the images and asked for Gropius’ assistance in compiling a special edition dedicated to the archival holdings of industrial building. To this end, he requested a meeting with Gropius and Diederichs to go over all the images at his home in October of 1912.\textsuperscript{40}

Throughout the years between 1911 and 1913, the two exhibitions travelled independently of one another, in and outside Germany. It was only at the Werkbund exhibition in Cologne where both were shown, and yet even in this context, they were presented in two different locations: \textit{Moderne Baukunst} was on display amidst the larger exhibition of applied arts in the Mail Hall, while Gropius staged \textit{Industriebauten} in his own office building design,\textsuperscript{41} no doubt to reinforce his own project’s standing in the trajectory of the new movement in architecture.

\textsuperscript{38} see Roeder, p. 6.

\textsuperscript{39} Also called \textit{Ingenieur-Architektur}. Included examples of work from Behrens, Beutinger, Erlwein, Riemerschmid, Poelzig, Taut, Wagner and Van de Velde. See Müller, p. 284.

\textsuperscript{40} Letter from Gropius to Osthaus, October 30 1912, KEO-Archiv (Kü 324/1).

\textsuperscript{41} As noted in the exhibition catalog from 1914. (BHA)
As noted earlier, not all the photographs were authored by Stoedtner, and not all the work manifested the same stylistic or formal motivations.\(^{42}\) In light of these potential discrepancies, the consistency of the images and their presentation was of utmost importance: both exhibitions used prints of identical dimensions (60x70 cm.), which were mounted in a continuous horizontal of 50-80 meters of wall space.\(^{43}\) In addition, Stoedtner gave Osthaus assurances that all buildings shot by his assistants would follow his particular instructions. In an effort to minimize distortion, larger scale structures were shot at elevated vantage points. The same held true for large interiors. In the case of smaller residential projects, camera positions remained largely at ground level, and cropping was close such that they too appeared large scale. Unlike earlier examples of urban topographic photography a few decades earlier, the Deutsches Museum images emphasized massing and tectonics. Exterior views were shot both frontally on center and at angles. The latter choice offset the 2 dimensionality of the picture plane to highlight instead the three-dimensional volume of the structures. The matte printing also appeared to be an effort to minimize the flatness of the image.

\(^{42}\) For example, Gropius was against including the more historicist Hellerau workshops by Richard Riemerschmid, but Osthaus vetoed him for political reasons. See Röder, p. 17.

\(^{43}\) The lending fee for the entire collection was 50 Marks, exclusive of freight and packing.
Unlike later examples from the 1920’s, the photographs produced for the Illustration Center did not take advantage of the modeling qualities of high contrast light and shadow. Rather, they highlighted the *sachliche*, stripped down surfaces of the exteriors; the perception of objectivity of the building was of greater concern than the graphic composition of the image. Nonetheless, particular formal operations like the use of axial symmetry in the shooting of interiors persisted.

In a short text introducing the *Industriebauten* collection, Gropius praised the precise forms of the buildings, their intrinsic and extrinsic clarity, their balanced proportions, as well as their tectonic hierarchy – all qualities he believed the new movement in architecture had to embrace. Rather than cloaking its true *sachliche* nature, *Baukunst*, he argued, married beauty with an explicit telegraphing of a formal *rappel à l’ordre*.44

---

*Germany in America: the German Applied Arts Exhibition of the Deutsches Museum, 1912-1913*

In letters addressed to the then head of the Newark Museum, the influential Curator of Industrial Design at the Museum of Modern Art, Edgar Kaufmann Jr. expressed his interest in obtaining documentation of the 1912

German exhibition that had been coordinated by John Cotton Dana and Osthaus for the Newark Museum. This request came at a time when Kaufmann was preparing an exhibition on industrial design for later that year.\(^{45}\) After receiving a copy of the catalogue, Kaufmann addressed another letter to Coffey:

> I have been looking with great interest through the Catalog of the 1912 German Applied Arts Exhibition...Many of the names in the show seem quite exciting to read today and I have no doubt that many men now famous were first seen in this country in this exhibit.\(^{46}\)

In fact, Kaufmann travelled to Newark to see the photographs of the exhibition.\(^{47}\) The touring exhibition of German Applied Arts was so successful that it formed the basis of the decorative arts section re-presented in 1913 at the World's Exposition in Ghent.\(^{48}\) Its 1912 tour of North America also included exhibitions in St. Louis (The City Art Museum), Chicago, (The Art Institute), Indianapolis (The John Herron Art Institute), and New York City.\(^{49}\)(FIGURES 3.10-3.11)

\(^{45}\) Edgar Kaufmann Jr. letter to Katherine Coffey, 26 March 1946. Newark Museum, John Cotton Dana Papers, Exhibition Files, Box 2, “Correspondence Edgar Kaufmann Jr.”

\(^{46}\) From a letter dated April 18, 1946.

\(^{47}\) Ibid.


\(^{49}\) *JahrsBericht Des Deutschen Museums Für Kunst in Handel und Gewerbe Hagen i.W. RechnungsJahr 1912/13*, Newark Museum, John Cotton Dana Papers Exhibit Files Box 3. The St. Louis Museum catalogue notes the dates as May-July 1912.
Unlike traditional museum installations, the objects from these exhibitions were both works on display and commodities for sale. This commercial feature of the showcases made the accompanying book a priority for both Osthaus and Dana: not just a souvenir, the Behrens designed catalog (FIGURE 3.12) also functioned as a commercial sales vehicle for the works on view; pricing in German Marks was determined by the Museum in Hagen, and while the catalog did not disclose the prices of the objects, each was assigned its own unique inventory number. Examples were divided according to categories ranging from graphic art to metal work to art photography (*Bildnisphotographie*), architecture and applied arts. As Osthaus announced to his American counterpart, “the exhibition will contain almost altogether objects designed by artists of the first rank. I have left out everything which imitates the antique and does not show creative impulse.”50 Indeed, sometimes overruling Gropius’ opinions, Osthaus made all final editorial decisions regarding the content of the exhibitions.

The success of the exhibitions, not unlike the success of any one object, was measured by their ability to promote and advance the broader polemical aims of the museum.51 The continued use of the term *Baukunst* for the

---

50 Letter from Osthaus to Dana 10 January 1912, Newark Museum, John Cotton Dana Papers, Exhibition Files, Box 3 – “German Applied Arts, Planning – Correspondence.”

51 It is worth noting that the Metropolitan Museum refused Dana’s offer to lend the exhibition, on the grounds that it had “commercial overtones.” Cited in Barbara Lipton,”
architectural examples connected *Sachlichkeit* with the Werkbund’s economic and cultural attitudes vis-à-vis aesthetics at a national and international level. Further, the exhibition continued the ethos of *Gesamtkunstwerk* in the yearbooks, and by extension the early lessons that Muthesius brought back from England. Chief among the aims of the show was to paint as broad a brush as possible in order to give the most complete picture of German output. Objects of all scales and uses were grouped according to manufacturer, function and type.

Osthaus echoed Muthesius’ primarily formal and tectonic (as contra-stylistic) position regarding architecture. *Baukunst* occupied a unique position in the show: examples of new buildings were listed first in the catalog, and Osthaus himself wrote the accompanying essay. In it, he reiterated that the photographic representation of architecture was an anomaly of the show since unlike the other objects on display, new developments in architecture could only be celebrated via an intermediary representational format. Photographs were deployed as stand-ins for the built forms, and although they were also for sale, they were distinct from the 37 examples of ‘art photography’ listed under a separate heading. Both categories of photographs had corresponding inventory numbers; in the catalog, architecture was represented through 85 images, but for reasons

---

of space, only 45 photographs were mounted at the Newark Museum.52 (FIGURE 3.13-3.14)

Exterior views were juxtaposed whenever possible with their corresponding interior views, echoing Muthesius’ more holistic view of Baukunst as Building-Art rather “mere” architecture. In addition to civic structures and private homes, newer building types like department stores and museums were highlighted and were meant to be read in an integrated manner with storefronts, interior design examples, furniture, and applied arts.

Osthaus also used Baukunst in his catalog introduction: “Creative artists who had started as painters, seized the ruler and square, designed furniture and built houses.”53 He argued that the buildings were conceived and created first and foremost by Baukünstler – a term that translates into English as a synonym for ‘architect’ but also relates to the figure of a ‘Master Builder’ who manipulates tectonics in an artful manner. Despite the diversity of the examples, all the work was bound by one common agenda, namely to address a newly industrialized society and an overarching desire for a renewal of aesthetic and spiritual life: “The core of German art is not directed necessarily towards creating a single trade, or isolated commercial products as towards reforming the whole of our

---
52 There is no indication that any images of architecture were sold.
53 Osthaus introduction, p. 9.
lives." Osthaus’ understanding of Baukunst was also influenced by a 1907 publication by Karl Scheffler, who also aligned architecture with other “functional building” (Nutzbau).\footnote{55} Ironically, this distinction between Baukunst and Architektur, which was so vital to Osthaus’ argument, was lost in translation: American audiences who read the exhibition catalogue saw only the word ‘architecture,’ and thereby were not privy to the linguistic nuances that were explicitly delineated in German.

Nonetheless, even as ‘architecture,’ the photographs had a double function: as artifacts with their own aesthetic and commercial value, and “in an indirect manner” as “picture(s)...of German genius.”\footnote{56} One thousand German and fifteen hundred English translations were produced and sent from Hagen to all the participating museums. While the exhibition was geared to American audiences, the Deutsches Museum’s assumption was that the work would be of particular interest to the German immigrant communities in these cities.

Echoing Lethaby’s roughly concurrent statements about Germany “racing ahead,” Dana noted,

\footnote{54} Osthaus introduction, pp. 3-4.
\footnote{55} Karl Scheffler, Modern Baukunst, (Berlin: Julius Bard, 1907). See also Wilhelm, pp. 15-40.
\footnote{56} Kurt Freyer, catalog introduction to the art photography section, p. 95.
We are inclined to overlook her advance in this field…it is appreciated to a very slight extent only in the United States, partly because we are too busy to consider art affairs, life here being a little too short for beauty, and partly because our European art news generally comes from France, and next to France, from England.

The fact that architecture was billed as an example of “German Industrial Art,” reflected Muthesius’ legacy. The journey that architecture had taken in the years since Muthesius’ *Stilarchitektur und Baukunst* was more than semantic; architectural objects were subsumed within the more expansive discursive domain of “design.” Again, the *sachliche* nature of the images reiterated the visual and tectonic unity Muthesius had advocated years before. And yet as in the case of the yearbooks from this period, discursive fissures among Werkbund members related to the notion of artistic autonomy in light of technological advances endured. Could the unique outcome of individual authorship be viewed in the same manner as technologically reproducible objects? Could the will of the artist be reconciled with machine fabrication? Could a spiritual life be attained within the conditions of modernity? These debates culminated in the often-cited ideological divisions that were manifest at the Cologne exhibition of 1914. They also laid the seeds for many cultural tropes of High Modernism; Gropius’ efforts

---

59 Osthaus Catalog, p.3.
to grapple with the inherent paradox of mass industry on the one hand and individual artistic production on the other remained a central struggle within his pedagogical stance at the Bauhaus.

_The Wanderaustellung Model and the Imaginary Museum_

By way of an interpretive model, I propose assessing the discursive impact of the Deutsches Museum’s exhibitions through the lens of André Malraux’s celebrated art historical treatise _Le Musée Imaginaire_ (translated in English as “The Museum without Walls”). First published in 1947, Malraux formulated a new museum “typology” and arguably a sort of anti-typology – in which the spatial enclosure would be removed in favor of “a new field” of engagement, one based in photographic images that in turn would radically alter the proximity of art with the viewer. (FIGURE 3.15)

Within the context of this chapter, both versions of the title _Musée Imaginaire_ – literally as an imaginary museum, and its curious English iteration

---

60 Malraux’s project for the _le Musée Imaginaire_ was conceived in the 1930’s but not published until 1947. In its original incarnation, it appeared as the first in a three volume study entitled _Essais de Psychologie de l’Art_ (Geneva: Skira, 1947), then a few years later in a revised and abridged version entitled _Les Voix de Silence_ (Paris: Gallimard, 1951). This edition was translated into English by Stuart Gilbert and entitled _The Voices of Silence_ (New York: Doubleday, 1953). The current study cites both a reprint of the English edition (Princeton: Princeton University Press, 1978) as well as the 1947 French edition. All translations are mine.

61 Malraux, _The Voices of Silence_, p. 13.

62 Ibid., p. 46.
as a “Museum Without Walls” – are relevant. Malraux’s conception of a museum ‘without walls’ referred to the necessity of its’ dismantling: the new museum was freed from the bricks and mortar physicality of its conventional predecessor; it was the specter of reproducibility that enabled the dismantling of the built enclosure. Because of their reduced size and “absence of volume,” photographs were portable, transient and infinitely adjustable to suit any given context or narrative. The “metamorphosis” that works of art underwent – from three-dimensional objects to two-dimensional illustrative plates (*planches*) was in Malraux’s view constitutive of the “strange and subtle transformation” that only photography could enable.

Situating our understanding of Malraux’s museum within a faithful translation of the title as “imaginary” yields yet other readings. The phrase, which in the original French is at times substituted for the word “reproduction,” is image-based. Specifically, it entails the use of the “technical conditions” specific to the medium of photography - one that Malraux identified as belonging to the category of ‘arts of the imagination’ (*arts d’imagination*). Separated from their

---

63 Ibid.
64 Ibid. pp. 68-69.
65 Ibid., p. 44.
66 Ibid., p. 47.
67 Ibid., p. 17.
sites of origin and their particular socio/cultural context, photography, but also easel painting and film, was never completely separated from its history, but the potential of its itinerancy and reproducibility offered new possibilities for re-framing cultural production.

This notion of photography as an imaginary art, and (therefore the museum without walls as an imaginary one) was also connected to Malraux’s argument that these were “living” forms of art. Works of art that were reproduced photographically could be presented and diffused in any number of ways. While Malraux’s notion of the imaginary museum focused on the reproduction of art in “art-book,” a similar argument could be made for exhibitions based on photographic reproductions, such as those staged by the Deutsches Museum.

As both “imaginary” and “living,” photography was a medium Malraux also referred to as “fictitious.” While works of art could be documented faithfully, and while their visual dissemination allowed for their reception by larger audiences, the experience of the work in its reduced photographic format was necessarily altered. Such a “specious unity” (l’équivoque unité) that photographic reproductions “imposed” gave the impression that the reproductions represented

69 Ibid., p. 16.
70 Ibid., p. 15.
71 Ibid., p. 24.
work that connoted a singular meaning, of a collection of disparate pieces that was presented as an “unbroken” visual “sequence.”

Malraux’s model of the imaginary museum serves as a pertinent working analogy to the efforts of the Deutches Museum. Indeed, the exhibitions of applied art and architecture conceived by Osthaus were strategically curated constructions of Germany circa 1910. Through the vehicle of the traveling museum, but also in its photographic representation, Werkbund sponsored architecture became a “living” art.

Returning to Malreaux, his conception of the *Musée Imaginaire* was meant to be understood as an extension of the conventional museum type, which too had undergone a transformative surge in the nineteenth century. Malraux contended that even in the earlier museum model, the spectator’s relationship to a work of art had already altered: severed from its original context and function, the artifact had already been packaged and re-presented within a geographically determined space.

---

72 Ibid., p. 46.
73 Malraux, p. 13.
74 T. J. Demos refers to Malraux’s *Musée Imaginaire* within the context of an analysis of Marcel Duchamp’s series of Bite-en-Valise series, which he refers to as a “portable museum.” Duchamp’s initial edition of 20 boxes was exhibited between 1935-1940. Demos argues that Duchamp’s “readymade museum” served as a precedent to Walter Benjamin’s “Work of Art” essay, which Malraux read in 1936. See T. J. Demos, *The Exiles of Marcel Duchamp*, (Cambridge: MIT Press, 2007), pp. 30-32.
In Malraux’s view, this disconnect created a moment of confrontation between “rival” and “hostile” works.\(^75\) He argued that another way to think of this confrontation was to understand the function of curation in the process of the artwork’s disengagement: the museum typology, Malreaux argued, gave rise to a new intermediary space between the work of art and its spectatorship. The curator whose primary role was to choose works according to a given theme may or may not have had any bearing on the artist’s original intention. The curatorial procedure whereby “some stand in for all,” invited criticism from the spectator, who in turn made further judgments about the objects in and of themselves, and in relation to the larger collection on display.\(^76\)

For Malraux, the development of photographic techniques around the turn of the 20th century played a particularly important role in expanding the field of visualizing art beyond the traditional confines of the museum. Indeed, the *Musée Imaginaire* came into being at the moment of photography’s reproducibility: negative-based images of three-dimensional *Arts Plastiques* (sculpture and statuary) as well as architecture liberated their subjects visually and discursively from their sites of origin. (FIGURE 3.16)

Like the museum collection, photography dislodged works of art from their site-specificity, but unlike the brick and mortar edifice, the imaginary museum’s

\(^{75}\) Malraux, p. 14.
\(^{76}\) Malraux, pp. 14-15.
grouping of objects from disparate historical and cultural contexts occurred at a much more rapid pace and on an entirely more vast and diffuse scale of distribution. Malraux’s own book performed the project of the imaginary museum with its trans-historical and pan-cultural juxtapositions. The new institutional and spatial paradigm of the *Musée Imaginaire* allowed for the stitching together of both movable and immovable works – creating a visual unity, however equivocal.\(^{77}\)

The geographic distances between any two notable buildings could be compared to the distance between one museum and another. In an example used by Malraux, if a visitor were to compare a work of art viewed at the Louvre with another in Madrid, one would be in Malraux’s words caught in a “no man’s land” (*zone vague*), forced to compare “a picture and a thing remembered.”\(^{78}\) Similarly, the virtual reality of the architectural object via its photographed likeness presented an opportunity for the spectator to compensate for the mental distance between the viewing of a building in a photograph and the actual experience of it.

\(^{77}\) *The Voices of Silence*, p. 46. In French, the phrase is “l’équivoque unité.” My translation.

\(^{78}\) “No-mans land” is in the English translation (*Voices of Silence*, p.16). Whereas in Malraux, the original French meaning is more inclined towards a mental space of aesthetic contemplation than it is to a physical place, thereby lending itself to the psycho-spatial notion of the imaginary museum. See *Le Psychology de L’Art*. 
The conceptual underpinnings of the Deutsches Museum and its adoption of a new discursive practice of photography prefigured Malraux’s ‘Supermuseum.’ The mechanization and industrialization of Germany was manifest both in the contents of the shows, but also in the choice of photography. Like the modern “art-book,” Osthaus’ virtual museum, (chiefly functioning as travelling exhibitions and illustrated catalogues), was mobile and portable; its itinerant quality was consistent with the provisional nature of Malreaux’s imaginary museum.

In attempting to extend this argument to images of architecture themselves, a strange doubling occurs - perhaps not unlike the effect of doubling by the photographic image: one could argue that the knowledge gained by the casual observer of the images of Werkbund architecture in Newark would be cursory at best. In fact, one long-standing critique of architecture in photography has centered on the (problematic) extraction of a building from its site. In his preface to the “German Applied Arts” catalogue, Osthaus made claims for the power of the travelling exhibition model that would manifest in a cultural exchange between America and Germany – a dialog that would find its basis in this new exhibition format. Again as the young Jeanneret remarked that same year, Osthaus’ aim was to assert a new image-based Zeitgeist: the role of the

photograph was first visual, and second, mnemonic. Osthaus also underscored his awareness of the power of the photographic medium as a propagandist tool: “the railways that traversed the country vie with the camera of the art investigator in imparting to the architects phantasy(sic)...(and) to the public, the art forms of remote epochs.”

This sentiment regarding the burgeoning power of photography was echoed by one reviewer of the Newark Show:

To see is to know. In this busy age each man is seeking to know all things, and life is too short for many words. The eye is used more and more, the ear less and less, and, in the use of the eye, descriptive writing is set aside for pictures, and pictures in their turn are replaced by actual objects.

Architectural form, by way of photography, had come to inhabit a hermeneutic middle ground: between reading and touching, between words and objects.

In this more expansive conceptual framework, the photographic tool permitted an unbroken (if not seamless) relay between artistic creation, propaganda, and commerce. In Osthaus’ dream scenario, the museum in its primary mode as travelling exhibition, would foster a continuous narrative from conception to production from collection to documentation, from exhibition to

---

80 Osthaus, exhibition catalogue, p. 8.
publication, and finally from the marketplace to the consumer. Despite Osthaus’
differences with Herman Muthesius, his language echoed the elder’s insistence
on the terminology of Baukunst. Buildings had taken a semantic journey in the
years that Muthesius wrote his essays on the topic at the turn of the century; as
the art of building and not style driven architecture, buildings were disseminated
within the more expansive domain of applied arts.

In their curatorial efforts, Gropius and Osthaus lay the groundwork for the
construction of a new photo based narrative for Wilhelmine architecture that
telegraphed both locally and internationally. As Douglas Crimp has noted,
Malraux argued that it was the destiny of art to be reframed by modernity, first by
its initial museum displacement and then by its dissemination onto the printed
page.\textsuperscript{82} Rosalind Krauss too has defined modernity spatially and within the
context of sitelessness, where both meaning and function became nomadic.\textsuperscript{83}

Similarly, I argue that the adoption of photography by the Werkbund and
Deutsches Museum as the preferred medium to disseminate and exhibit
architecture anticipated the first steps of an emergent modernism. Indeed, many
of the strategies endemic to later intersections of photography with architecture
anticipated more familiar Bauhaus examples from the interwar period. With the

\begin{itemize}
\item \textsuperscript{82} On the Museum’s Ruins, p. 54.
\item \textsuperscript{83} Rosalind Krauss, “Sculpture in the Expanded Field,” in \textit{October} vol. 8 (Spring 1979), p. 34.
\end{itemize}
Deutsches Museum’s travelling exhibitions, the impulse in the 1920’s to blanket the world with migratory photographs found its roots - at least in part - before 1914.

Fragments on the Archive

In an essay entitled “the Body and the Archive,” the late photographer Alan Sekula defined the archive as both “abstract paradigmatic entity,” and a “concrete institution.” As Jacques Derrida noted, personal collections, as distinct from archives, marked an institutional passage from private and public. Through a sequence of etymologically rooted statements, Derrida examined the archive within the space of architecture: “there is no archive without a space of consignation, without a technique of repetition, and without a certain exteriority. No archive without outside.” The contents of the archive in Derrida’s construct underwent both de-spatialization and de-temporalization. Yet the archive itself denoted a physical place within a discreet space and time.

With the Deutsches Museum, Osthaus created an institution whose very existence was defined by an archive, and which originated in his own collection. And yet, for his collection to reach the scale of an archive, existing collections

---

86 Ibid., p. 11.
needed to be augmented and new ones created. The institutionalization of Osthaus’ collection coincided with the institution of the Deutsches Museum. As primarily an archive, the museum was an abstract entity. The objects and images gathered within it functioned only amidst the discourse enveloping it writ large.

As a monument to Osthaus and to the achievements of the Werkbund, the Deutsches Museum stockpiled its own institutional history, and was a reflection of its own milieu. Photography was a means to an end: the spreading of Werkbund gospel on modern architecture was only possible through a process of mechanical mediation. Photographs printed and presented in an identical fashion in exhibitions or used in public lectures or as illustrations in bound volumes manifested particular constructions of unity.

Read in proximity to Malraux’s construct of the imaginary museum, Benjamin defined the role of collections as detaching objects from their original function, in order to conceive of their relation to things of the same kind.87 Once objects entered the space of the archive, their function was to reinforce the continuity of the collection. And yet, while for Benjamin the act of collecting was more significant the collection itself, the Deutsches Museum’s architectural photographs were the linchpins of that institution’s discursive formation. They simulated a unity, which in turn lent to the abstraction of their subjects. Individual

87 Walter Benjamin, The Arcades Project [H2a, 3], pp. 207-208.
works that had emanated from often-divergent ideologies were embedded in the continuum of photographs. Classification replaced origins and new meanings were substituted for old ones. If images of buildings became fragments of them, the space of writing became the metaphorical mortar that re-assembled them. Only in the intertwining of *Wort* and *Bild* could the unity of the modern message be achieved.

Michel Foucault’s conception of discourse was analogous to the above remarks on the archive. As collections of fragments, archives in Foucault’s view “enable a sort of great uniform text” in which “each element considered is taken as the expression of a totality.”\(^8\) No single object, like no one statement, exists independently of the others. Rather, it constitutes a part of a “network of statements”\(^9\) within the “complex volume” of discourse that enables its dispersal.\(^10\) Furthermore, Foucault endowed the archive with tectonic metaphors: “statements…are preserved by virtue of a number of supports and material techniques, in accordance with certain types of institutions.”\(^11\)

The objects and images that made up the Deutsches Museum were also part of a larger relational web in which the archive – as spatial and institutional archiv-al...
construct – sorted and tabulated (telegraphing Lethaby) discourse. Like both Benjamin and Foucault’s remarks on the archive, the material fragments of Werkbund production that were re-assembled in exhibitions and books challenged both causality and teleology: homogeneity surpassed heterogeneity as formal and stylistic idiosyncrasies were papered over in favor of constructed continuities and fictive totalities. While they maintained some residues of personal and collective histories, their meta-story was singular. As images of buildings accumulated in the archives, the impulse to generalize them into types was inevitable. Channeling Benjamin yet again, buildings were “stripped bare.”92 Often partial iterations of their archival sources, exhibitions and books – the twentieth century spaces of photography93 - represented second order curatorial intent. Likewise, the architecture that emanated from the Werkbund and Deutsches Museum discourses also resembled the fundamental nature of the archive: it embodied the nexus of all narratives, the site where history transformed into space.94

---

92 Walter Benjamin, The Arcades Project, p. 204.
93 Molly Nesbit Atget's Seven Albums, p. 88.
Fig. 3.1 Cover, Charles-Édouard Jeanneret, Étude sur le Mouvement D'Art Décoratif en Allemagne, Haefeli: La Chaux-de-Fonds, 1912.
Fig. 3.2 Charles-Édouard Jeanneret in 1911. (Jeanneret, Charles Eduard) Étude sur le Mouvement d’Art Décoratif en Allemagne (La Chaux-de-Fonds, 1912). Reprinted in French, New York: Da Capo Press, 1968.
Fig. 3.3 Logo of the Deutsches Museum circa 1912.
Fig. 3.4 Cover of typical lending contact sheet album, Franz Stoedtner, “German Architecture from the 19th century, Volume I.” Courtesy Marburg photo archives.
Fig. 3.5 Example, contact sheet, Franz Stoedtner, Album 93a “German Architecture from the 19th century, Volume I.” Courtesy Marburg photo archives.
Fig. 3.6 Typical catalog sheet showing examples from Olbrich and Pankok. Courtesy Marburg photo archives.
Fig. 3.7 Catalog sheet showing interior views of the Palais Stoclet. Courtesy Marburg photo archives.
Fig. 3.8 Exterior view of Fagus complex as it appeared in the Werkbund Yearbook of 1913. (Jena: E. Diederichs.)
Fig. 3.9 Examples of North American factories as they appeared in the Werkbund Yearbook 1913. (Jena: E. Diederichs.)
Fig. 3.10 Exhibition view, New York, 1912. Courtesy Dana Archives.
Fig. 3.11 Cover, English catalogue of Deutsches Museum touring exhibition of 1912. Courtesy Newark Museum.
Fig. 3.12 Title page, English catalogue of Deutsches Museum touring exhibition of 1912. Courtesy Newark Museum.
Fig. 3.13 Exhibition view of Newark show with two rows of ‘Baukunst’ photographs in rear. 1912. Courtesy Dana Archives, Newark Museum.
Fig. 3.14 Exhibition view, Newark, as published in *The Newarker* (1912). Courtesy Newark Museum.
Fig. 3.15 Cover, André Malraux, “Le Musée Imaginaire,” Volume One, in Essais de Psychologie de l’Art. (1947)
Fig. 3.16 André Malraux, “Le Musée Imaginaire.”
Chapter Four: Image Control: Walter Gropius, the Fagus Factory, and Operative History

The veracity of the camera is proverbial...Truth may be stranger than fiction, but many of the camera’s statements are stranger than the truth itself. We tend to forget that every photograph is an artifact, a document recording forever a momentary construction based upon reality.¹

As this dissertation has argued, Walter Gropius’ position on photography and its use owes at least a partial debt in content and form to the Werkbund’s use of the medium in its yearbooks and in the writings of its members, in particular Hermann Muthesius. Gropius’ curatorial involvement in the Deutsches Museum’s travelling exhibitions before the First World War only furthered the development of his keen propagandist eye.

Chapter Four uses Gropius and Adolf Meyer’s Fagus Factory (1910-1914) as a case study to track photography’s role in crafting an image of the complex of buildings as the singular precursor to Gropius’ later work at the Bauhaus and beyond. By evaluating pre-war images of the Fagus by Edmund Lill in tandem with post-war images by Albert Renger-Patzsch, the influence of later Bauhaus attitudes toward photographic media in re-visioning Wilhelmine architectural production becomes evident. In fact, I argue that the earlier and later images operate in parallel to the project’s textual and mediatic re-framing; from the work

as evidence of Peter Behrens’ influence, to its status as precursor to the International Style. Stated another way, the Fagus was reframed not as an example of a post-AEG Turbine project but instead was positioned as a proto-modern piece of architecture. It is within this latter context that I evaluate the dissemination of the Fagus in the writings of Swiss Art historian Sigfried Giedion and contend that his remarks on the project exemplify its definitive “break” from the past, and thereby stand in as the project’s ur-texts for its subsequent historiography.² Gropius’ working relationship with Giedion further cemented the selective history of the Fagus.

Between 1911 and 1954 (the latter date coinciding with Giedion’s Work and Teamwork) the project transformed seemingly before our eyes as a fitting prelude to Gropius’ campus designs in Dessau, and as such, has become a canon of modern architecture in spite of its’ more complicated and heterogeneous provenance. Lill and Renger-Patzsch’s photographs presented two dominant strands for the medium’s use in architectural discourse – on the

² While there has been extensive scholarship on Walter Gropius’ early career, no analysis to my knowledge has been made between the earlier and later images within the framework of their textual manifestations in subsequent historiography. See for example Annemarie Jaeggi, Fagus: Industrial Culture From the Werkbund to the Bauhaus, (Princeton and New York: Princeton Architectural Press, 2000), Karen Wilhelm, Walter Gropius – Industriearchitekt, (Braunschweig/Wiesbaden: Verweg und Sohn Verlag, 1983), and Hartmut Probst and Christian Schädlich, Walter Gropius (three volumes), (Berlin, 1986-1988).
one hand as archival documents to be saved for posterity, and on the other, as vehicles to foster a new order of seeing.

Further, I attempt to trace images of the Fagus project in relation to the larger notion of ‘operative’ history. As outlined by Manfredo Tafuri, operative criticism – the tradition of historical research represented by historians such as Nikolaus Pevsner and Sigfried Giedion – self-reflexively consolidated the history leading up to the modern movement in order to present the latter as a unified amalgam of practices and outcomes. Such a consolidation required a selective historical reading that delineated a clear genealogy for the movement, in part by simplifying the historical tendencies in opposition to it: the battle of styles in the nineteenth century and its resultant era of eclecticism. Historians in this category believed it a mandate of their discipline to re-read the past through the lens of the present and retained only those aspects of the former they deemed “still vital.”

This criticism was in turn tied to the so-called “pioneers” of modern architecture, among whom Gropius assumes a central position. Tafuri identified

---

3 Manfredo Tafuri, Theories and History of Architecture, pp. 141-169.
5 Sigfried Giedion, Space Time and Architecture, p. 6. Also cited in Tournikiotis, p. 45.
these figures not only with their practices, but also in the way they crafted their stories alongside and often in concert with, the discipline of architectural history.

As the rhetorical boundaries between history and practice became blurred, so too did the line between history and theory: words and images were selectively edited to serve a larger ideological project. Similar to Hermann Muthesius’ photographic mediation of the new architecture in Germany, this ‘project’ was materialist in the sense that it produced media artifacts (including but not limited to books, photographs, films) that help build an unbroken bridge to the future of architectural form. A materialist reading à la Benjamin framed the visual arts and architecture within a cultural superstructure and as a basis for modern society.

Specifically in relation to the Fagus factory, post-World War I illustrative techniques codified by Laszlo Moholy-Nagy among others at the Bauhaus (and endorsed by Gropius and Giedion) along with photographs authored by Albert Renger-Patzsch propelled an image of architecture that married the Fagus’ formal and tectonic properties with technological innovation - an image that required cropping the project to show only that moment in which the union between design and industry was most manifest: the appearance of a glazed wall wrapping the main office building. Mostly owing to one photograph by Renger-Patzsch – number 16 in his first Fagus series shot in 1928 - this cropping was
canonized to such a degree that images of the project beyond this detail were vigorously contested and eliminated.

In part, the aim of this chapter is to ask the following questions: can a fuller picture of the Fagus project’s material, tectonic and ideological position in history be reframed? By juxtaposing early and later text/image exchanges in which the story of the factory has been written and re-written, do the often-divergent aims and editorial stances of their authors clarify the construction of a larger mandate of modernist historiography?

Gropius and History

As a young member of the Werkbund, Walter Gropius understood the power of photography to exert control over the narrative of architecture within a larger arc of history. Through the vehicle of travelling exhibitions, the exponential growth of image archives at the Deutsches Museum in which he played a part, and his own burgeoning collection of photographs, Gropius exploited the value of architectural images to polemically craft readings of the built environment. In fact, by the time of the founding of the Bauhaus in Dessau, Gropius had already begun curating the visual output and dissemination of his own projects.

As the historian Winfried Nerdinger has noted, Bruno Zevi, a figure to whom we will return later in the chapter, and a former Gropius student at the
Harvard Graduate School of Design, indicted the elder for his “reactionary and biased concept of history.” This statement is based on the fact that art and architectural history at the Bauhaus were never taught regularly as required courses. In fact, even as Hannes Meyer formally initiated an architectural curriculum in 1927, history was left out.

In an essay entitled “My Conception of the Bauhaus Idea,” Gropius elucidated the core principles of his pedagogical approach. Central to this was his notion of “training” through the development of a language that prioritized visual over technical skills. Gropius equated this visual language with “a special language of shape,” which manifested in the “visible expression” of ideas. He went even further to define the evolution of visual literacy as constitutive of a “scientific knowledge of objectively valid optical facts,” of which examples included “optical illusions.”

As in his lectures dating from his earlier Werkbund career, Gropius repeatedly incorporated images of industrial architecture in presentations from

---

8 Ibid., p. 90.
10 Ibid.
the 1920’s, as well as his own Fagus project. Rather than framing modern architecture within a broader engagement of precedents, Gropius used history selectively to favor his own intentions and agenda, both before and after the formation of the Bauhaus.

Gropius’ interest in history was targeted; he viewed it as a vehicle to understand the use of materials and the deployment of techniques, and not in their wholesale adoption in form making. His anti-imitative stance could be summed thus: “clear cognition of what lies behind the forms…should be the only topic of these studies.”

Furthermore, studies in architectural history provided the basis for what Gropius in “Blueprint of an Architect’s Education,” (1943) referred to as “fact-knowledge,” an element of architectural pedagogy that, in his view, had been overemphasized to the detriment of design intuition. It was after all the latter that provided the “eternal source of all creative action.”

Gropius’ pedagogical attitude towards history was further codified at Harvard, where he was chair of the architecture department between 1937-1952, and where under his leadership, the architectural history curriculum radically altered. In yet another essay from 1949 entitled “Not Gothic but Modern for our Colleges,” Gropius decried the “purely analytical and intellectual approach” to

---

11 Cited in Nerdinger, pp. 91, 94-95.
pedagogy, in which history courses played a central role. The consequence of this system, Gropius explained, was that visual apprehension was developed in light of historical and critical methods of appreciation.”13 He continued: “we seem to have forgotten that there is an opportunity to make architectural history for ourselves, and to have buildings designed in unmistakable terms for our period.”14 As a result of these prevailing views, Gropius re-designated previously required survey courses as electives;15 in short, history for Gropius was useful insofar as it validated his conception of modern architecture.

Gropius and the Picture Book: Internationale Architektur (1925)

“So wrote Gropius in the forward to the first in the series of Bauhausbücher. Published in 1925 and coinciding with the founding of the new Bauhaus campus in Dessau, its aim was described in the opening to function as a “picture book of the modern art of building.”16 While Baukunst within the context of this dissertation has its origins in Muthesius, the notion of creating a “picture book” went counter to the elder’s explicit warning two decades earlier in The

13 Ibid., p. 66.
14 Ibid., p. 67.
15 Nerdinger, p. 94.
17 Ibid.
English House. Muthesius insisted that text and image work in a symbiotic manner, for images to be checked by words in order to avoid facile histories of architecture as “pattern books.” With the exception of the brief forward and image captions, Internationale Architektur was meant not to be read, but looked at.

Muthesius’ warning about the complete subordination of text over image presaged the proliferation of image-centered publications such as this, which reflected their moment of production. Nonetheless, it bears noting that what the text lacked in content, it made up for in rhetorical punch: the purpose of the images was central and accounted for their graphic dominance on the page. As Gropius pronounced, the images succinctly defined the “common features” that bound the examples and further, manifested “the will to develop a unified world picture, the will which characterizes our age.”18 The particular formal features of the buildings were neutralized by the common treatment of the images, thus enabling the self-fulfilling prophecy of the Modern Movement to manifest “a uniformity of character.”19 By extension, the architectural examples – though disparate in their provenances – were united in their “strict utilization of time, space, material and money.”20 In reference to the publication, noted historian

19 Ibid.
20 Ibid.
Werner Oechslin writes that “modernity entered into a contract with the image,” but in fact this contract had begun much earlier.

The conception and layout of the publication – while graphically a product of the Bauhaus (not accidently, Gropius commissioned fellow Bauhaus pedagogue Laszlo Moholy-Nagy to conceive the typography and its layout) bore a striking resemblance to the pre-war Werkbund yearbooks. As in the earlier instance, images were generally kept to one per page, their orientations alternated from portrait to landscape, and text was limited to captions. As I note in chapter three, examples in the yearbooks were usually limited to contemporary production. One important exception was Gropius’ inclusion of earlier industrial examples from North America, which were previously published as addenda to his “Entwicklung” essay.

In both cases, the illustrations purported to provide an overview, but in 1925, Gropius had the benefit of adding numerous recently completed buildings, including the Fagus. This is not a coincidence. The illustrations in the Werkbund yearbooks were organized and categorized according to type or function. By 1925, Gropius’ emphasis was on tectonics, but not in the more expansive sense demonstrated in Muthesius’ writings. Rather, he defined it more strictly as the

---

deployment of new materials using new construction methods. Gropius’ efforts to parse his conception of tectonics were also evidence of his deployment of the photograph as an editorial tool; the Fagus was part of a select group of pre-war projects that in his view, ushered a new language. Its images were refocused to further his larger intention to draw a clear and inevitable direction for modern architecture.

The Fagus Photographs

Before embarking on a rigorous analysis of the deployment of photography at the service of framing the story of the Fagus project, a brief chronology of the images as taken by its two chief photographers is needed. Hamburg based photographer Edmund Lill documented the Fagus for owner Karl Benscheidt in two phases. The first phase documented the factory complex in its early stages of development between 1910 and 1913 and the second illustrated the eventual addition to and expansion of the project after the First World War (1914, 1925).

The first series of photographs documented the construction of the project, while also providing illustrative material for marketing and advertising purposes.22

22 AnnMarie Jaeggi provides a more detailed and definitive account of the execution of the Fagus campus. See her book Fagus: Industrial Culture from the Werkbund to the Bauhaus, p. 16.
To this end, Lill produced roughly 100 images for the company archives. The expansion of the complex, which had begun in 1913/1914 resumed after the end of hostilities. Lill returned to Alfeld an Leine in 1922 to undertake a second series of photographs. As in the earlier examples, his mandate was to record the second phase of construction, ostensibly for purposes of updating the company's archive and for promotional material produced in house.

Karl Bendscheidt hired a second photographer, Albert Renger-Patzsch in 1928 to produce promotional material for the company. Some of these photographs appeared in Die Welt ist Schön (1928), which was published shortly after the series was completed. Renger-Patsch’s captured machinery and product close-ups, factory owners and the architecture of the complex.\(^{23}\) He produced a follow up series in 1952.\(^{24}\)

In light of founding of the Bauhaus Weimar in 1919, and given Gropius’ increasing interest in distancing himself from his pre-war work, Lill was also instructed by him and his partner Adolf Meyer to shoot the project in a particular manner.\(^{25}\) The resultant images were taken in closer proximity of the glass and iron façade of the main office block and its extension to the south. While earlier

\(^{23}\) According to Jaeggi, the photographer intended the images to be viewed in sequence.
\(^{24}\) Ibid. p 110.
\(^{25}\) Cited in Jaeggi, p. 110.
sections of the complex were still in view, the position of the camera vis-à-vis the newer building was such that it dominated the picture plane. (FIGURES 4.1-4.2)

The production of a second series was timely since it coincided with the production of his 1925 Internationale Architektur. Among these projects was his own Fagus complex, for which he used a Lill image from 1922.(FIGURE 4.3) Gropius’ editorial choice of this photograph and no other views is logical, since it was only through this perceived curtain wall that the building could be neatly positioned as a direct precursor to his Bauhaus campus design. This image and others were selected to highlight shared formal traits that referred not to a bygone style but emanated from their technological “will to form” (Gestaltungswille),26 and thus represented work of national and international significance.

Gropius and Giedion: Defining the Modern in Tandem

Sigfried Giedion and Walter Gropius’ operative histories aligned where modern architecture was concerned; Giedion was one of the first historians to advocate for Gropius’ vision for the Bauhaus, and in particular after the school’s move to Dessau. Giedion, like Gropius used the Beaux-Arts as a counterpoint to the modern movement and in so doing, surgically edited the Werkbund’s

history. Indeed, the visual dissemination of the Fagus project after 1928, arguably more than any other from the Günderzeit of the Wilhelmine period, illustrated the degree to which Gropius’ editorial decisions, in concert with Giedion’s writing helped shape the building’s historical legacy.

In Walter Gropius: Work and Teamwork (published simultaneously in English and German in 1954), Giedion referred to the Fagus project as evidence of a “trend towards transparency and absence of weight.” Once again, placed in proximity to Peter Behren’s AEG Turbine Hall of 1908/09, Giedion proclaimed that Gropius’ factory marked a departure from the earlier structure that was both “spontaneous” and “unexpected.” Walls were no longer load bearing, but rather had receded to “mere screens.” And yet, as represented by Edmund Lill in the 1913 yearbook, the building in Giedion’s view was “barely recognizable.” The characterization of the Fagus office block envelope as “mere screens” was not one that originated from Giedion, but rather quoted from Gropius’ The New Architecture and the Bauhaus. (FIGURE 4.4) In it, Gropius referenced the

---

29 Ibid., 23.
30 Ibid., 24.
31 It bears mentioning that the original German manuscript dates from 1925 – and thus co-terminus with the publication of Internationale Architektur, but which was only
primacy of the building’s “outward” formal appearance, which he viewed as an “inevitable logical product” of the building’s material and spatial development.32 Through the fundamental transformation of the wall to “mere screen,” the term window underwent a similar transformation, such that the ratio of (solid) wall and (void) window - as “sparkling insubstantiality” - exemplified a substantial reversal in ratio.33 This attitude of ethereality as it related to the Fagus was encapsulated by Alan Colquhoun in his history of modern architecture, noting of the project that “its illusionism … (was) a matter of bringing out the transcendent qualities of materials – particularly glass.”34

On the surface, Giedion’s account of the Fagus appears to present it among others as part of a larger biography of Gropius’ work. And yet as Winfried Nerdinger describes in an essay from 2001, Giedion’s formal ‘description’ of the building was also purely citational. Often co-opting Gropius’ own words, the invocation of a so-called ‘new’ architecture necessitated the reduction of 19th century architecture to developments in engineering and construction development and to the Chicago School.35

33 Ibid., pp. 26-29.
In the context of the 1950’s, it appears as if the pre-war images had outlived both their descriptive and connotative value: rather than being front and center, “the glass walls,” Giedion noted, were “thrust into the far distance.”\(^{36}\)(SEE FIGURE 3.8) Furthermore, Lill’s particular selection of “views” (no doubt meant to be more inclusive as documents) made the work appear as if it were “dominated by walls of masonry.”\(^{37}\) New images were needed to argue his (and Gropius’) point more effectively, namely that the architecturally designed factory was “one of the building types in which glass and steel are married together” in a revolutionary way, where the tensions between architecture and technology had finally been resolved.\(^{38}\)(FIGURE 4.4)

In fact, whereas Lill’s photographs were used extensively before the war in the yearbooks, trade journals and in advertising material, as well as in traveling exhibitions, Renger-Patzsch’s images were privileged in most subsequent scholarship. In them, the masonry indeed appears to have “disappeared,” thereby fulfilling Giedion’s rhetorical claims. Renger-Patzsch’s compositional and editorial decisions complemented those of Giedion and Gropius; if the building were to be perceived as *sachlich*, then significant cropping would need to occur.

\(^{37}\) Ibid.
\(^{38}\) Ibid.
While initially commissioned by Benscheidt, the Renger-Patzsch series became central to the architect’s efforts to curate his legacy before the Bauhaus.

The first Renger-Patzsch view chosen was of the main building through the entrance gate and offered a convenient framing device to obscure the less compelling (read: less “new”) part of the complex.39 (FIGURE 4.5) The graphically dense image of lines and surfaces was followed by two contemporary images that privileged the glass curtain walls (FIGURES 4.6-4.7), and culminated in the last and most closely cropped image of the southwest corner, also attributable to Renger-Patzsch.40 This latter image revealed a clear distinction between structure and infill, a detail that is further exemplified by the column-free glazed corners.(FIGURE 4.8) Image #16 was also used by Gropius as a frontispiece for his 1935 The New Architecture and the Bauhaus,41 and not surprisingly, since it conveyed more effectively the “breach” in Gropius’s work that had been made with the past.42 Put another way, the breach had been enabled by the controlling of the image. Again, the interchangeability of Giedion’s and Gropius’ writing further obfuscated the origins of the historian’s claims.

39 Work and Teamwork, p. 91.
40 Ibid., p 98.
41 First published in English translation in 1935, and based on Gropius’ 1925 manuscript Die neue Architektur und das Bauhaus: Grundzüge und Entwicklung einer Konzeption.
In this context, the Fagus became the paradigmatic standard-bearer for what Gropius considered the ongoing dialog between art and industry. This fact was reiterated by the image’s proximity to two views of Gropius’ factory pavilions from the Cologne fair of 1914. As reinforced in the earlier Werkbund yearbooks, the marriage between hand production and machine standardization was to be achieved in a two-pronged manner: on the one hand, the evolution from brick and stone masonry construction to steel and concrete manifested the marriage in a tectonic manner. On the other hand, these new building paradigms enabled the achievement of formal standards. As if channeling Muthesius, the new architecture marked its return to “honesty and thought in feeling.”

In comparing the two sets of images of the Fagus, it is clear how the earlier photographs contradicted to some extent Giedion’s agenda for the project; it would seem that the old Lill photographs were wrong and the newer rhetoric was right. Giedion (via Renger Patzsch) emphasized the glass and steel – the skin and bones, as it were. In contrast, the yearbook images documented the building complex in its entirety, and as such more accurately represented the predominance of the masonry, despite the restraint that Gropius exhibited in its formal massing and ornament-free surfaces.

43 P. 19.
This editorial logic is consistent with Giedion’s earlier remarks on history in *Space Time and Architecture* (1941), where he used Renger-Patzsch images of the entry and image #16 in his chapter entitled “The German Development.”(FIGURE 4.9) In his forward to the first edition, Giedion stated that his study cast a wider net by asserting the role of history to uncover an otherwise “secret synthesis” in order to help society navigate its way through the chaos of unfolding events. Continuing in literally photographic language, Giedion argued for a history defined not as a “compilation of facts” nor “obtained by the exclusive use of the panoramic or bird’s eye view.”44 Rather, he asserted that the historian’s responsibility was to offer “insight into a moving process of life,” by “isolating and examining certain specific events intensively, penetrating and exploring them in the manner of the close-up.”45 I would argue that this interpretive model superimposed both men’s attitude towards images. The Fagus project and many other proto-modern buildings like it had undergone a similar telescoping, which enabled *ex post facto* a visually uninterrupted line of vision from 1911 to 1954.

Today, with several decades of hindsight and subsequent operative historicizing, it is clear that both Gropius and Giedion retroactively crafted - indeed cropped, re-framed, and in some cases eliminated – examples from the

45 Ibid.
former’s pre-war career in order to serve as a more fitting precursor to the
architect’s Weimar era production at the Bauhaus and at Harvard. Towards the
end of his career, one could argue that Gropius’ view had in some ways come full
circle. In his introduction to *Scope of Total Architecture*, a collection of essays
predominantly written during tenure at the GSD, Gropius proclaimed that the
discipline in its most complete or “total” sense mirrored the constituent feature of
democracies in that both had to engage in an effective “interplay” of seemingly
contradictory aims: maintaining a diversity of ideas in the discourse, while also
holding fast to the “essential” and “typical” features of regional expression.46 In so
doing, Gropius reinforced the modernist trope of a movement without precedent,
as a “decisive break from an eclectic period of architecture to an entirely new
material language.”47

Giedion’s remarks on the Fagus (and their instrumentalization via highly
curated images) constituted part of a larger normative trend vis-à-vis the Fagus
and its role as a significant benchmark for the Modern Movement. In fact, his
particular historiography of the project must be read in the context of Nikolaus
Pevsner’s teleological account: one could only encourage and hasten the arrival
of the ‘new’ architecture, or one could be irrelevant. Therefore architects only

46 The Scope Of Total Architecture, p. 13.
needed to pay attention to those figures and works that complemented the
message of the inevitable new world order.

**Discursive Resistance and the ‘Accidents’ of Photography**

In *The Heroic Period of Modern Architecture* (1965), English architects
Alison and Peter Smithson reprinted several of the images of the Fagus from
Giedion’s *Work and Teamwork*, but also from Lill’s earlier series, signaling a
more egalitarian approach the project’s photographs. (FIGURES 4.10-4.11) While
the Smithsons claimed the function of the book was simply as “a collection of
their favorite things,” the Fagus images were accompanied by a provocative text
entitled: “Tribute to Frank Lloyd Wright.” On the American, they asserted that he
“remained until the end an architect of the Art Nouveau.” They continued: “his
buildings were always with rare exceptions private worlds into which artifacts
from the outside entered with difficulty,” and yet Wright, perhaps unwittingly,
had inspired a new generation of European architecture - an architecture of
“liberated space, full of light and the spirit of ordinariness” - all concepts that
Peter Smithson claimed “the master found unacceptable to the end.” In addition
to the six Fagus photographs, the Smithsons added images (one each) of August

---

55 Alison and Peter Smithson, *The Heroic Period of Architecture* (1965). This citation is
56 Ibid.
Perret’s Casablanca docks, Le Corbusier’s *Maison Dom-ino*, and Adolf Loos’ Steiner House. For the Smithsons, the Fagus project constituted one in a group of “chance buildings” that framed the beginnings of the “Heroic Period,” which they defined as the years just before and after World War One: “The Heroic Period of Modern Architecture is the rock on which we stand. Through it we feel the continuity of history and the necessity of achieving our own idea of order.”

One of the editorial criteria for the publication the Smithsons deployed was to “ensure that the most well known images are the most potent, checking the source books against personal or assured live knowledge.” They referred to individual images as “documents,” and the whole as a “collection,” which in turn was meant to function as a “work-document.” Much like a pattern book, they viewed the images as discreet objects that flowed freely in the space of modernism and were presented chronologically “without comment or explanation.”

Furthermore, they noted that this type of survey or collection would most likely be the last of its kind, since the architecture of their own period would be best suited to “air views, sequential photographs, and system explanations.” These types of images and illustrations were also in existence in the modernist

---

57 *The Heroic Period of Architecture*, p. 5.
58 Ibid.
59 Ibid.
60 Ibid.
period. Yet, as the Smithsons noted, the more or less “straight” approach to the architecture of the modernist period - in so far as “buildings” were concerned - was the privileged mode. The buildings were distinguished for their material but especially formal achievements, and thus best served by frontal or corner views, and evenly lit interior shots.

From their vantage point in the 1960’s, the Smithsons regarded their generation as one defined not by objects (therefore demanding a more situated approach to its visual transmission) or an “architecture as a fact,” “a complete thing in itself…poised not rooted to its site,”61 but rather by “built-places,” one which demanded a shift in representational attitude to more heterogeneous scales with an emphasis on the structural and infrastructural frameworks supporting architecture, on institutional critique, and on network theories.62

Finally, in a lengthy paragraph that began chapter 6 of Theory and Design in the First Machine Age and entitled “The Factory Aesthetic,” historian Reyner Banham situated the Fagus factory project in proximity to photography, but also in light of its stubborn yet undeniable connection to its immediate pre-history. He began by attending to the mythology surrounding the Fagus factory by Gropius and his partner Adolf Meyer, a mythology enabled by photographs:

---

61 Ibid., p. 9.
62 Ibid.
(it)is frequently taken to be the first building of the Modern Movement properly so-called, the end of the pioneer phase in Modern architecture. There can be little doubt that it owes this high esteem in part to Gropius’s personal relationship to the historians of the Modern Movement, and also, in part, to the accidents of photography – it is possible, by a hostile selection of photographs to make it appear no more ‘Modern’ than, say, Behrens’s Eppenhausen development of 1907.63

The ‘hostility’ to which the author referred pointed to Bruno Zevi’s Poetica dell’Architettura NeoPlastica of 1953,64 which as Banham remarked in his own footnote to the word, presented such a selection “for polemical reasons.”65 Within its illustrative setting, Zevi’s book situated the Fagus factory in proximity to illustrations to projects by Expressionist architects such as Max Berg (Jahrhunderthalle, 1913), Hans Poelzig (Berlin Theater, 1919), Erich Mendelsohn (Einstein Tower, 1921) and Otto Bartning (Haus Wylerberg, 1923). These images combined with his narration situated the provenance of the project within a larger historical framework - one that highlighted influential contributions by Theo Van Doesburg, August Perret, the English Arts and Crafts movement, Muthesius, Henry van de Velde and, (like the Smithsons) Frank Lloyd Wright.66

64 It is well known that Zevi was a student at the GSD under Gropius’ leadership.
65 Ibid.
Zevi’s remarks on the Fagus project aimed to illustrate Gropius’ intellectual and ideological mindset in the years leading up to the inauguration of the Bauhaus Dessau. Far from being clear-cut, the architectural climate post 1914 was one in which contrasting opinions were characterized by Zevi as “fiery,” “obstinate,” and even “angry.”67 No doubt referring to the oft-cited debate between Muthesius and Henry Van de Velde at the Werkbund congress of 1914, Zevi noted that Gropius was inevitably “caught in the middle of this relentless struggle.” This struggle was one that the author distilled as a “clash between objectivism and subjectivism,” and whose residues had become embedded in the foundational aims of the Bauhaus Dessau under Gropius: a complex “embrace” between disparate themes of machine “poetics” and the “naturalist symbolism of Einfühlung” (empathy), between “the objectivism of Sachlichkeit” and the “production of handicraft,” and from “cubism to expressionism.”68

As for Zevi’s hostile editorial stance vis-à-vis photography, one can assume that Banham was referring to his use of a trio of images that reflected this milieu of complexity and contradiction. (FIGURE 4.12) Their layout on one page was surely intentional, especially when read in concert with Zevi’s remarks on the project: “Only when looking at architecture in its whole complexity more

67 Poetica dell’Architettura NeoPlastica, pp. 22-24. My thanks to Giuseppe Mazzone at UW–Milwaukee for his assistance with this translation. 68 Ibid., p.24.
than in just a few photographs it is possible to discover details usually overlooked." Indeed, when interpreted as a whole, the grouping embodied the problems of so-called canonical projects from the pre-war period.

The images performed Zevi’s critique of them: of the first –illustration #13– he noted “hesitations in volumetric joinery.” This photograph was a slightly cropped version of one taken by Lill and has rarely -if ever- been reproduced in architectural history books, or even in monographic studies of Gropius (FIGURE 4.13). The second and third –illustrations #14 and #15– comprised a corner view of the main building from the south showing the entry, and the now ubiquitous image #16 by Renger-Patzsch from 1928. Of these, Zevi pointed to “the anomaly of a load bearing structure stuck to a glass box…solved so roughly that not even the horizontal offsets in the elevation can hide it…” Gropius and Meyer’s Cologne Pavilion did not fare better: Zevi renounced it as little more than a “combination of volumes from the Arts and Crafts and the Art Nouveau…motifs inspired by Frank Lloyd Wright badly implemented.”

By dating the Fagus complex between 1911 and 1914 rather than its typical dating of simply 1911, Zevi rightly situated the Fagus ‘glass box’ as an

______________

69 Ibid.
70 Ibid.
71 Ibid.
extension of earlier experiments with seemingly self-supporting glazed corners at Cologne. As Annemarie Jaeggi notes, the Fagus’ famous extension was only fully realized after the end of the 1914 exhibition.\textsuperscript{72} Like the Smithsons and Banham, Zevi referenced the Arts and Crafts, Art Nouveau and Frank Lloyd Wright in direct lineage to the Fagus and Pavilion. In so doing, he also underplayed the straightforward linkage with these projects and earlier North American industrial buildings.

While even Gropius’ most fervent supporter Sigfried Giedion paid due respect to Peter Behrens’ Turbine Factory, he made clear that the Gropius factory was a radical departure made possible only by its severe (photographic and thus tectonic) cropping. Only through this surgical move could the Fagus affirm an unequivocal ‘marriage’ between glass and steel. Zevi’s portrayal of the project demanded a multi-dimensional and multi-faceted vision – an argument for complexity that repudiated the purported seamlessness of Gropius’ “breach.”

If we return again to Banham’s reference to Zevi’s selection of photographs as ‘hostile,’ the comparison he made with the latter’s editorial decision was even more provocative: again, when seen in its larger context, the project appeared “no more ‘modern’” than Peter Behrens’s Eppenhausen

\textsuperscript{72} Here and elsewhere, I have relied on Annemarie Jaeggi’s definitive history of the Fagus to verify dates of construction and the phasing of the project’s completion. Annemarie Jaeggi, Fagus: Industrial Culture From the Werkbund to the Bauhaus, (Princeton and New York: Princeton Architectural Press, 2000).
projects. Banham was explicitly referring to the design of houses that were part of a larger planned community in Hagen funded by Karl Ernst Osthaus (with a master plan conceived by Henry Van de Velde and Peter Behrens). Haus Schroeder and Haus Cuno as they were known were built between the years 1908 and 1910, and as such were contemporaneous with the Turbine factory in Berlin. (FIGURES 4.14-4.15) However, what is more significant is that of the two houses to which Banham refers, Haus Cuno was particularly emblematic of his position. It is well known that Gropius was at Behrens’ studio in 1907, but what is less known is that he consulted on the Cuno project.\(^7\) It is owing to Gropius’ involvement with this project that differences between the two escalated, precipitating the young architect’s eventual departure from the office.\(^7\)

Therefore, the choice by Banham of the houses as analogous to the Fagus further exacerbated Zevi’s point. Rather than a clear-cut expression of Sachlichkeit, the purported functionalist ‘modernity’ of the factory complex was “visible, indeed, only on parts of two sides…” and “…(in) strong contrast to the unadventurous neo-Classical regularity of the rest…” \(^7\) Banham was correct when he stated that Behrens’s houses lay “well within the scope and intentions of

\(^7\) These differences were stylistic and methodological, and relayed in Gropius’ correspondence with Osthaus at the time. See Stanford Anderson, Peter Behrens and a New Architecture for the Twentieth Century, (Cambridge: MIT Press, 2002), footnote 27, p. 311.

\(^7\) Ibid.

\(^7\) Theory and Design in the Machine Age, p.79.
the current body of Werkbund practices and ideas.”76 Neither objective nor expressionist, neither purely functionalist nor strictly historicist, the Behrens projects were an accurate reflection of the heterogeneous context of the pre-war Werkbund. I contend that they were also representative examples of “Moderne Baukunst,” a fact that was borne out by their exhibition throughout Europe and the United States as part of the Deutsches Museum’s *Wanderaustellung*.77 Missing from 1912 were images of Gropius’ famous corner, since it had not yet been completed.

To conclude, Banham’s use of the Fagus project as a central example underscored a recurring theme in his writings vis-à-vis the use of photography in architectural history: as in his essay on photography published seven years before *Theory and Design in the Machine Age*, a quote from which opens this chapter, and in his later remarks in *The Concrete Atlantis*, the author reiterated his skepticism about photography’s presumed authority on ‘truth’ and mediatic ‘objectivity.’78 Specifically in relation to the narrative of the Modern Movement made ‘visible’ by its chief proponents, Banham was articulating the danger of the

76 Ibid.
77 They are listed alongside several other projects on view at the touring exhibition of the Deutsches Museum. See exhibition catalog, p. 14.
medium in presenting a false construction – one that was, in turn, codified as a trope.

Banham’s opening paragraph encapsulated the story of the Fagus Project in its visualization and erasure. In questioning at the very least the origins of the style residing with the Fagus, Banham pointed to Gropius’ complicit activism in the historical reconstruction of the project, its positioning as pioneer and thus its role as hinge between the modern and that which preceded it. He also underscored the arbitrary nature of writing and crafting a history on the shoulders of a photographic “accident.” In the hands of Gropius and Giedion, the photographs were not used with an understanding of their absolute truth - i.e. to capture a moment in time prima facie- but rather in their operative truth – i.e. to capture a “momentary construction based upon reality.”79

As with many other examples from the pre-Bauhaus period, the Fagus can be thought of as a kind of architectural palimpsest: its material reality was effaced and eclipsed by its photographic re-framing; its particular story was written and re-written through images. Along the way, the ideological forces behind the codification of photographic illustration in the Werkbund were replaced by the self-fulfilling rhetoric of the so-called “new” movement, which favored a hegemonic message in words and images, in Wort und Bild. In so doing, its

79 See footnote 1 above.
singular rendering in operative discourse effectively suppressed all previous
anxieties of the turn of the century – captured then erased. Much in the spirit of a
phrase attributed to Mies van der Rohe, but which originated in the nineteenth
century, less is more.
Fig. 4.1 Fagus project, the 1922 view shot by Lill from the south. Note crop marks, presumabley made by Gropius. inv. # 6130/2 with gropius stamp 11/6 (WBA W10 (4)) Also published in Internationale Architektur, but without cropping.
Fig. 4.2 Fagus-Werk, Verso. Crop marks elaborated, with Dessau stamp. (WBA W10 (4) 11/6)
Fig. 4.3 Fagus-Werk, 1922 view from the south, see (FIGURE 4.1), and as published in Internationale Architektur, but with crop marks removed.
Fig. 4.4 Exterior view, by Albert Renger-Patzch - image #16 from the Fagus series - as published in The New Architecture in the Bauhaus, Work and Teamwork, The Heroic Period of Modern Architecture, among many others. It is here that Gropuis connects the image directly to a “breach with the past.” Cited in The New Architecture in the Bauhaus, pp. 18-19.
Fig. 4.5 View of Fagus entrance taken by Albert Renger-Patzsch, as published in *Work and Teamwork*, Reinhold Publishing Corporation, New York, 1954. p. 91. This image is used as the opening of the section entitled "Early Work."
Fig. 4.6 Exterior view of the Fagus cited in Giedion as a photograph from 1953, in Work and Teamwork, Reinhold Publishing Corporation, New York, 1954. p.96.
Fig. 4.7 Exterior view of the Fagus, in *Work and Teamwork*, Reinhold Publishing Corporation, New York, 1954. p. 97.
Fig. 4.8 Exterior view, image #16 by Albert Renger-Patzch from the Fagus series, as published in *Work and Teamwork*, Reinhold Publishing Corporation, New York, 1954. p. 98.
At about the same time the architect Ernst May was called in to organize the housing development on the outskirts of Frankfurt-on-Main. May worked with Hausmannian speed and energy; he was not fortunate enough, however, to be granted a seventeen-year period for his operations. After a few years the whole enterprise was cut short—a familiar happening in German history. While the work continued, May showed the open-mindedness which marked the Deutsche Werkbund by employing foreign architects, several Austrians and a Dutchman, Mart Stam.

In 1929 the government—through the Deutsche Werkbund—gave Mies van der Rohe full charge of the German pavilion at the Barcelona exhibition. In 1930 Walter Gropius was chosen to organize the first German exhibition at the Paris Salon since the war.

The Werkbund period witnessed a complete change in the status of the architect in Germany. In this period he ceased to be subservient to clients and contractors, as he is in so many countries even now. It was recognized that the architect had a part in forming the spirit of his times.
Fig. 4.10 Page from Alison and Peter Smithson with three views of the Fagus, two of which are lesser known. The Heroic Period of Modern Architecture, New York: Rizzoli 1981. p. 6.
TRIBUTE TO FRANK LLOYD WRIGHT

Frank Lloyd Wright remained until the end an architect of the art novoa. His buildings were always with rare exceptions private works into which artistry from the outside entered with difficulty. At the turn of the century there were two newly important architects, F.L. Wright and C.F. Møller. Both men included in their work some highly developed rectangular systems of building derived presumably from a common oriental source. Systems of square sections, overlapping, obviously public, natural finished constructions, which could be extended to light fittings, furniture and to decoration. Neither man used the system exclusively but it was this particular material in the hands of F.L. Wright which was seen in Europe before 1914 and the ability of his space that went with it that fired the imagination of the generation of Frank Lloyd Wright and Le Corbusier. A world in which a door had opened to light, light for itself light controlled for itself, and it was a fact a world full of light that rose from the light of horned eyes that was ennobled by art nouveau. And one which the master found unacceptable to the end.

Frank Lloyd Wright was seminal to the architecture of the twentieth century.

Peter Smithson, Paris, April 1960.

1914

Le Corbusier, Pierre Jeanneret, Maison Domaine, 1914

Gropius, Walter Gropius

1915

A. and E. Inemi Docks, Casablanca, 1915

Fig. 4.11 Page from Alison and Peter Smithson, which shows earlier Lill images as well as Renger-Patzch Image #16, The Heroic Period of Modern Architecture, New York: Rizzoli 1981. p. 7.
Fig. 4.12 Bruno Zevi, illustrations of the Fagus, in *Poetica Dell’ Architettura Neoplastica*, Milan: Libreria Editrice Politecnica Tamburini, 1953. p. 23.
Fig. 4.13 Edmund Lill, exterior view, production building at Fagus campus, 1911 (WBA W10(6), Inv. #5939/87 - 11/10) Slightly cropped version of this image is reproduced by Bruni Zevi in his Poetica Dell' Architettura Neoplastica. Milan: Libreria Editrice Politecnica Tamburini, 1953.
Fig. 4.14 Peter Behrens, Haus Schroeder, 1908/1909, rear view, (Inv.# 419.327 BAFM)
Fig. 4.15 Peter Behrens, Haus Cuno, 1909/1910 street view, (BK 013/KEO)
Conclusion

The illiterates of the future will be ignorant of the use
of camera and pen alike.¹

It is a truism to state that the discourse on architecture is more complex
than the discourse on building. The former encompasses a larger matrix of
histories and theories of philosophy, aesthetics and tectonics. Media in all its
valences of representation and reproducibility are particularly inscribed in the
discourse of architecture, and especially in the modernist period. An examination
of representational modes from this period tells only a piece of any story on
building; as a zoomed in fragment, it overshadows all that may stand beyond the
limits of the frame. The medium is the message. Indeed, photographs of
architecture short-circuit our perception of buildings; they re-present them. In the
discourse of modernity in its nascent stage, photography offered a new
interpretive model.

This dissertation has argued that this operative zooming began in the
Wilhelmine period. Muthesius’ pronouncements on Sachlichkeit aside, the text
and image engagements produced in his pre-Werkbund books crafted a rhetoric
that was notable for its dismissal of “Style- Architecture.” His preference for a

¹ Lazlo Moholy-Nagy, “Photography in a Flash,” in Richard Kostelanetz ed., Moholy-
shift in illustrative mode from earlier models to photography presaged Moholy-Nagy’s definition of the medium’s reproducibility to “the objective fixation of the semblance of an object.”\(^2\) Photography’s mechanical eye in Moholy-Nagy’s view connoted an “abstract seeing” that nonetheless produced “direct records of forms.”\(^3\) I contend that these lines could just as well have been written by Muthesius in his study of the English house. In his and other publications of the time that enthusiastically adopted photography, images were embedded within a larger context of active reading; as in the case of photographs in the Deutsches Museum’s travelling exhibitions, the images that completed the words embodied a progressiveness that had yet to be matched by the objects of their gaze.

By the 1920’s, the chronology of the architectural object and its photography had inverted, such that architecture was made with the photograph in mind, and ultimately photographs made buildings. They were and are allies with a common cause.\(^4\) Put another way, the photograph affected not only the pictorial outcome of the representational mode, but also influenced the conception of the building itself.

\(^3\) Ibid., p. 52.
As Walter Benjamin noted in his “Little History of Photography,” the medium “got hold of” architecture like no other mode of illustration. He contended that since the widespread adoption of mechanical reproduction, our understanding of the work of art, but especially of architecture had reached a turning point: buildings could no longer be credited to a single author, but rather to a “collective creation” absorbed by a mass audience. The dissociative and objectified nature of photographs relative to their subjects made them complicit in the miniaturization of the built world; thus the need for the activist and normative role of captions.

Similarly, in framing his pre-war work in direct proximity to architectural modernism, Gropius controlled key moments in his biography by cutting the images and objects of his Werkbund years out of his later writing. The recurrence of the Fagus project was an exception to the rule, not a “chance building” as the Smithsons coined it, because its captions were re-written to comply with its cropped history. Masonry was phenomenologically removed such that only glass walls remained. This fact was not a product of accident, but a control tactic.

Returning to Benjamin, he argued that “in the final analysis,” photographs were armed with “a technique of diminution that helps people to achieve control

---

6 Ibid.
over works of art – a control without whose aid they could no longer be
used.”7 Here, the text echoed Gottfried Semper’s remarks in *der Stil*:

> Man is surrounded by a world full of things which are amazing, and powers of whose laws he has intimations but can never unravel – intimations which reach him only in occasional fragmentary harmonies …he conjures up for himself, in play, the perfection which he misses; he builds in miniature in which cosmic laws appear before him …self contained in this respect perfect.8

Semper’s words in turn recalled Hegel’s argument in his *Aesthetics*, whereby man as a “thinking consciousness” replaced the world before him with one that he had constructed.9 Agency over the image trumped agency of the real world of objects. What was for Benjamin a threat on the part of photographs to contravene in our understanding of phenomena *in situ* was requisite for these figures to situate thought as an autonomous activity.

The institutionalization of modernism in architecture during the 1920’s coincided with the development of an increasingly sophisticated representational language, and at times, this coincidence telegraphed an image of a seamless unity where there was none. While Tafuri ascribed “operative” history to later

7 Ibid.
9 Ibid.
work, this dissertation has attempted to articulate a narrative of architecture and photography whereby the control over both the medium and the message was in full swing at the turn of the century.

Tafuri’s trope of the operative functioned in part in the shadow of this lineage, or rather it attempted to subsume it within a broader analysis of architectural production – how forms and their meanings came to be. This criticality implied a value judgment. As one traces the trajectory explored in this dissertation, one could argue that the very notion of criticality itself evolved from the implicit and explicit role of images in the discourse on the ‘modern.’ Like critique itself, photographs operated with the necessary pre-condition of dislocation (of objects, buildings, and sites), from historical spatial and temporal origins. As such the risk of teleological reading was substantial. Operative criticism acknowledged the projection of values on the past to construct a future as yet to be written. Ideology over history.

At a macro level, this dissertation aims to offer a critical reassessment of Bauhaus production as foundational to modernism’s media engagements between images and buildings. A study of the use of photographic media by founding members of the Werkbund reveals the disciplinary anxieties of an emergent modernism. Holding fast to the photograph as both object and image, I have attempted to map its trajectory – at times peripheral and other times central...
– through particular moments in German architectural discourse up to the First World War.

Some of the problems encountered through the photographic mediation of architecture - namely separation, dispersion, cooption and translation - were not only introduced in the Wilhelmine era, they were widely rehearsed - if not codified- as precursors to more well-known case studies from the 1920’s, and certainly well in advance of our current predisposition to all things visual. Amidst this wider cross-temporal net, I have aimed to challenge both photographs and the objects they depict with their discursive limits and formal contradictions in mind.

An examination of the broader circumstances and contexts in which photographs intervened in the pre-history of architectural modernism is critical to any reassessment of post-war architecture culture. As reality itself is an effect of representation, photographs likewise test the truth content of the objects they image. The immersion of photographs in architectural publications reveals the ways in which theories about architecture are constructed at the moment of their visibility.
BIBLIOGRAPHY

Archival Resources

-Hermann Muthesius Estate, Werkbund Archive, Berlin [WBA]
-Walther Gropius Estate, Bauhaus Archive, Berlin, Germany [WG/BHA]
-Fagus/Bendscheidt Estate, Bauhaus Archive, Berlin, Germany [Fagus/BHA]
-Franz Stoedner Estate, Bildarchiv Foto Marburg, Marburg, Germany [Stoedtner / BAFM]
-Karl Ernst Osthaus Estate, KEO Museum and Archive, Hagen, Germany [KEO]
-The photography collection of the CCA, Montreal, Canada [CCA]
-The John Cotton Dana Papers, Newark Museum

Periodicals, journals, serials

-Academy Architecture (London, 1889-1895)
-Archiv für wissenschaftliche Photographie (1899-1901)
-Der Industriebau (1910-1924)
-Die Form (Berendt edited between 1925-1926, and issued by the Deutscher Werkbund)
-Der Kunstwart (Munich, 1887-1912)
-L’Esprit Nouveau, no. 1-28,8 vol.(1920-1925) C.E.
-Jahrbuch für Photographie und Reproduktionstechnik (Halle, 1887-1919)
-Monatshefte für Baukunst und Städtebau (1914-1942) (Ernst Wasmuth, editor/publisher)
-The Architect and Building News (UK)
-The Architectural Review (UK)
-The Architects’ Journal (UK 1919-)
-The Studio (London, 1893-1964)
-The Photographic Society (now the Journal of the Royal Photographic Society)
-Journal of the Society of Architectural Historians of Great Britain
-Wasmuths Monatshefte für Baukunst und Städtebau vol 1-4(1914-1918)
PRIMARY SOURCES


Goode, J. Brown. The Newarker. Volume 1, no. 6, April 1912.


___________. “Faltblatt zur Wanderaustellung 18 des Deutschen Museums fur Kunst in Handel und Gewerbe,” (1911).


_____________. Voyage D’Orient. (1911, revised 1965) Paris: Éditions Forces


“Kunst und Machine,” Dekorative Kunst, 9 (1902)


Nerdinger, Winfried. “From Bauhaus to Harvard: Walter Gropius and the Use of History.” In The History of History in American Schools of Architecture,


Scott, Dixon, “The Function of the Camera,” reprinted in Beaumont Newhall,


Abstraktion und einfühlung; ein Beitreg zur Stilpsychologie. Neuwied: Heuser, 1907.


SECONDARY SOURCES

Nineteenth Century Design and Aesthetics


Lux, Josef August. “Artistic secrets of the Kodak,” translated by Mark

___________. *Der Geschmack im Alltag: ein Buch zur Pflege des Schonen*. Dresden: Gerhard Kuhtmann, 1908.

___________. *Das Neue Kunstgewerbe in Deutschland*. Leipzig: Kinkhardt and Bierman, 1908.


___________. *Ingenieuraesthetik*. (1910)


Twentieth Century German Modernism


Charles Eduard Jeanneret


General


_____________. Sieg des Neuen Baustils. Stuttgart ; Fr. Wedekind, 1927.


Photography


General Sources


