The Predominant Image

Architecture recaptured by the emancipation of photography

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A thesis submitted for the degree of
Doctor of Philosophy
at the
School of Architecture
Royal College of Art
2022

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Word count: 85031

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Signature:

Date: 04.09.2022

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Abstract

The role of architecture in the development of photography and the acknowledgement of photography as an independent art form are often encountered in texts on photography and art history. The role of photography in the development of architecture is, however, discussed less frequently and in rather unclear terms. Architecture has always been informed by other disciplines and practices, incorporating their learnings within its own body of knowledge. Inevitably, photography's role as an integral part of architectural practice and its dissemination has been crucial to its trans-disciplinary evolution. As a medium of seeing and re-reading, the photograph becomes a mechanism through which architecture can be seen and experienced anew.

Photography can be considered either as a technical device or as an artistic medium, and the latter is what enables it to form and reshape notions of architecture through its interdisciplinary application. The photograph becomes an instrument of looking, understanding, and recreating reality and, as a visual medium, communicating it and developing theories and propositions. Each artistic photographic expression of built space can be seen as an architectural investigation in its own right, shaping ideas through its aesthetic and compositional principles. The establishment of the Düsseldorf School of Photography in the 1970s was a pivotal moment in the acknowledgement of photography as an independent art form and its association with built space. At the same time, a parallel shift was experienced in architecture, with theorists and practising architects engaging more and more with photography as a medium for developing ideas that would later become key subjects of architectural discussion.

The thesis discusses a series of paradigmatic architectural subjects that have been fundamentally influenced by photography. These subjects are read through the artistic photographic approaches that created them, enabling links to form between developments in the discipline of photography and their architectural counterparts. Following a relatively chronological timeline it takes prominent theories of architectural typology as a starting point, moving to more diverse definitions of the ordinary and the vernacular. It continues by exploring the conceptual notions of presence and absence in space and through to the expression and construction of "real" space. Finally, it revisits the subject of "seeing" and visual abstraction in conjunction with the development of prototypical architectural concepts.

The thesis argues that architectural investigations, whether theoretical or practical, are more intrinsically linked to the photographic discipline than is expressed in current architectural theory and that these investigations reveal that photography has been a much more fundamental than practical instrument for architectural practice, theory, and dissemination. As a distinct discipline it has the potential to re-frame fundamental architectural concepts, offer a new set of investigative practices and provide an added layer of understanding space. While the thesis focuses on these specific cases it also

presents a framework of investigation for other areas of architectural investigation where, by applying this new disciplinary perspective on photography, architects might gain further insight into subjects that are taken as given.

List of Illustrations

Introduction

Born in the late 1980s, and having had an education entirely within architecture, I have found the presence of photography within architecture to have been consistently unquestioned. Whether as a leisure pursuit or as an elective course at university, photography was an additional skill to acquire in order to improve one's creative skills and expression. Its implementation in architectural processes was only vaguely referred to outside of historical references such as Le Corbusier's relationship with photography, or the collaboration of Aldo Rossi and Luigi Ghirri. As part of architectural design, in the early years of architectural education photography was used for research through documentation and reference and to create conceptual collages. As the use of computers and image editing programmes grew more prevalent, photography also became an ancillary tool to provide realism in conceptual designs. Even in photography courses, where the subject of photography was the central focus, architecture would again be a main theme to be eventually critiqued and questioned. This form of education and practice has changed little in the decades since the '60s despite the advent of new digital methods of capturing and editing photographs. In this educational context, photography, like drawing, painting, and sculpture, has been just another skill with which to visually portray and express architecture.

Photography and architecture are two subjects that are often encountered interchangeably in both fields from the early invention of photography to the more integrated everyday practice that we experience today. Many theorists and philosophers have addressed the nature of photography and its role in our society and culture. When it comes to architecture, photography is often revisited as a societal and technological background, its impact presented through these values. As a distinct artistic discipline, however, there has been little research on its influence on the development of architecture, and even this is circumstantial at best. The role of photography in architecture has become an engaging subject on several occasions, some of which will inevitably be explored in this thesis, such as instances of well-known photographers memorialising architecture through their photographs, collaborations between architects and photographers, and the implementation of photography by architects to demonstrate their thought processes and projects further. In education, photography as a technique has also been taught on and off through the years, in a course or assignment that is offered to provide further creativity and exploration in terms of students' skills but that has not had formal reasoning and support for its inclusion in architectural education. This has until now been generally explained by the view that architecture is always informed by other disciplines and practices, incorporating their learnings unquestionably within its own body of knowledge, and so, inevitably, photography has been incorporated as an integral part of the architectural practice without much critical thought, despite evidence that its dissemination has played a considerable role in its trans-

disciplinary evolution. After two centuries of unrestrained exploration, appropriation, and implementation, and with its continuing and increasing prevalence in architecture, photography merits consideration not only to explore the influence of its practice in a case-by-case approach, but also to ask whether this rapidly developing field has had a more fundamental role in the contemporary architectural discipline, and what that may have potentially been.

Considering the involved role of photography in architecture, the exploration of the thesis begins by looking into how the artistic definition of photography might have affected the development of architecture in the last few decades. The thesis then further focuses the question on how the artistic photographic depiction of the built environment influences the understanding of architectural space and consequently its design. In particular, it looks into the artistic emancipation of photography as a distinct form of art, and how this defining change in its identity and reception in the broader fields of photography and the arts also impacted its role in architecture. Taking into account the interdisciplinary nature of architecture, the thesis looks to how architecture turns towards other disciplines and practices to respond to critical questions that are fundamental to its nature, and seeks the unique role that photography played in the relatively recent developments within architectural theory and practice. Therefore, the thesis looks to further uncover, and define, what these specific architectural ideas are that photography's changing identity has come to influence, and at the same time, identify in what ways this influence has transpired.

As part of this line of questioning, other side questions appear to concern the initial investigation; before the question "how is artistic photography influencing architecture?" lies "what is the role of photography in architecture?", as well as "what was it in this particular shift in photography's acknowledgment as a distinct form of art that affected photography's impact in architecture?" which then in turn further inspires a broader investigation of not only what concerns photography but also other fields and disciplines whose role and identity has shifted throughout their course and their impact in architecture has gone largely unnoticed. While not focusing on this broader investigation, the thesis aims to use the example of photography's emancipation as a leading example in the exploration of the thought processes and impulsive adoption of this burgeoning field and the effects it has had on architectural developments, an approach that could be applied in a similar fashion for other fields. This interdisciplinary adoption, while it is recognised in many architectural investigations, is not always clear, and the appropriation of ideas, concepts and practices can be identified with no discernible acknowledgement given to other disciplinary sources. As will be seen in this research, photography has been an interesting and approachable practice with significant potential, one which for a long time was considered to be no more than a practical, albeit creative and engaging, tool. Now, though, the artistic emancipation of photography and its clear identification as a distinct discipline warrants a review of its role in architecture, not only to foreground its contribution but also to assist in understanding more about the nature of the architectural discipline and its future in this exceptionally visual society.

In particular, the thesis will explore artistic photography of the architectural landscape as a definitive way to develop concepts that have been adopted or adapted in architecture that represent an important part of architectural education today. These paradigmatic architectural investigations include typological and classification analyses, research into the ordinary and the architectural vernacular, the definition of social architecture through design based on presence and absence, architectural concepts of truth and fallacy within the real and the fictional, and the theory of the "concept" as understood through the practice of abstraction. Each of these areas belong to both theoretical and practical approaches that have been taught to architecture students in recent years and as a result form the future direction of architectural discourse. Building on the relationship between architecture and photography that is found to be instrumental in the development of these concepts presents the interdisciplinary role of photography as having a historical, social, methodological, and above all visual influence on architectural theory and design practice that also directly affects the future development of architecture through education.

The exploration begins with the shift in photography's position in the arts and its subsequent rise in the visual discourse taking place from the mid- to late '60s up to the 2020s, and it presents concurrent developments in architectural theory that have significant roots in ideas developed during the development of photography in the same period. Therefore, the thesis is ordered in a thematic, broadly chronological sequence initially exploring the historical and theoretical background of photography and architecture in the nineteenth and twentieth centuries, continuing with a more focused analysis that begins with the establishment of the first photography school[1] in Europe, finally examining the work of artists who have emerged in the last few years. Throughout these five approaches the artists and their work illustrate the fundamental bearing the image has had on the development of architecture and the leading conceptual streams that define these modern perspectives as the research enquiries into the transferral of influence between photography and designer.

Methodology

The research begins with the acknowledgement of an implicit influence of photography in the development of architectural ideas, theories, and practices. The aim of the thesis is to transform this implicit understanding into an explicit account of photography's artistic emancipation in the development of these various facets of architecture. In order to present this account, the research focuses on architectural theories that see a distinct rise in the last few decades, coinciding with photography's artistic emancipation. This approach is fundamental in the thesis and appears through a juxtaposition of common theories between architecture and artistic photography. The first case study

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[1] Both as an educational institution on a distinct photographic discipline and a school of thought.

on Typology has acted as an instructive introduction into this approach and allowed for the definition of the following case studies where common threads between architecture and photography were resulting in similar subjects of inquiry.

The research, being an investigation of established theories and ideas in an attempt to bring forward an underlying yet significant influence, applies a methodology that is based on perspective. It is often referred to, throughout the research, as "ways of seeing", inspired by the homonymous work by John Berger. In a similar sense, John Berger's works "Ways of Seeing" (1972) and "Understanding a Photograph: John Berger" (2013), and Michael Fried's "Why Photography Matters as Art as Never Before" (2008), that are further explored later in the thesis, greatly inform this methodological approach. Berger's narrative form of writing and historical positioning, referencing, and contextualising art and photography within a broader socioeconomic, cultural and political scope, and Fried's thematic structure and reasoning[2] are instructive in the initial formation of the research and later strategy and design of the thesis. In their distinct ways, they have inspired and instructed this new perspective of established views through an updated lens that informs the entire thesis.

The variation in the theories and ideas explored here results in an implementation of methods according to the availability of material and sources. Historical explorations that date decades old have required sourcing of material from archives, collections, and second-hand bibliographic references, while more recent explorations rely additionally on recent publications, exhibitions, and reviewing other relevant events. Therefore, the sourcing of additional studies, observations, and material is another significant part of this methodology. During the time-frame of the research several works by artists mentioned in the research, including Bernd and Hilla Becher, Thomas Struth, Candida Höfer, Andreas Gursky, Hiroshi Sugimoto among others, were being exhibited in museums and private galleries. This access to the original material was a key element to the development of the thesis. It allowed for a closer look to their work, an understanding of the impact of perspective due to their distinct scale, and access to further archival material pertaining their own research and work process. They also continue to present the undergoing climate of photography's new identity and its increasing relevance within an architectural context that the thesis attempts to highlight. Additionally, archives and special collections provided further access to material and subsequently insights of historical, photographic, and architectural interest, sources that are selected according to the nature of the case study and the more general scope of each chapter, often introducing new material for consideration within an architectural discourse that until now was almost exclusively pertaining to artistic and photographic purposes. Combined, these methods of research and data collection respond

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[2] By reasoning I refer to the premise of his book which is on the importance of photography's artistic emancipation, as well as the various arguments he presents, with most important being the formation of the Düsseldorf School of Photography and the "tableau" form as defined by Jean-Francois Chevrier. These subjects are explored in the chapter A brief overview of photography and its "seeing".

to the different requirements presented in each section of the thesis and provide a versatile strategy to structuring this methodology of "ways of seeing".

The nature of this approach, therefore, positions the thesis within a qualitative methodology; the thesis implements a combination of case study research, archive and special collections research, thematic analysis, and content analysis. All of these methods form both the structure and direction of the thesis in varying degrees with the case study research approach being one of the central approaches to creating the current thematic structure. The main structure of the thesis is the identification and definition of what are considered to be some of the key theories and concepts of the last half century in architecture, subjects that not only deal with modern concerns but are also directly involved to various degrees with similar developments in the photographic discipline. Due to this cross-referencing, the research follows a systematic analysis applied to the interdisciplinary relationship between artistic photographic movements and investigations and similar theories and key moments of the development of architecture. The link between photography and architecture is analysed in three different ways, each providing a distinct relationship between these two fields. These relationships are an immediate outcome of a preponderance of visual imagery and the increased access to these images on a constant basis, even more so when it comes to fine art photography, that is the result of extensive research and methodological development with the aim of communicating the artists' intentions and concepts. Although this research focuses on this specific image type, the predominance of the visual is an extensive phenomenon that directly correlates to the capacity of the image to influence.

The first method of approach is the definition and structuring of the five main categories, that are formed by broad ideas through which photographers communicate to architects how to see and perceive space. This methodology remains constant throughout the research and is the foundation on which the connections between image and architecture take form and which, in turn, forms the structure of the thesis, as each category becomes a separate chapter of investigation. These categories are constructed through a historical and theoretical analysis of photographers' work, a critical evaluation of the message these artists and their work aim to convey, and finally the association with architectural ideas and practices in their work. The categories are assembled around artists whose work endeavours to portray this association in the most direct and coherent manner, through its chronological and seminal presence; at the same time, it is accompanied by a theoretical review that already implies a certain association between the two interdisciplinary subjects in question. Therefore, this methodology aims to clarify these associations by further assembling supportive material that can substantiate them.

The second method applied in the research involves an investigation of the relation between the image and the architect, and the ensuing effects of this. It is an analysis based on the chronology and appropriation of subjects, focusing primarily on the architectural outcome after this interdisciplinary interaction. It explores the level and possibility of the exposure of the architect

themselves, or the theory, to the artist's concepts or work of art and the outcome of this meeting of ideas. These contacts may be identified either through a historical juxtaposition, a third-person reference or a first-person statement, and the connection is then analysed and further supported by a theoretical and historical examination. This will help to provide a candid account of how images by artists using the medium of photography, as explored in the research, has affected some of the most influential architectural practices today and how ideas resurface and transform through the years and via different fields. The resulting material will be a juxtaposition of archival material, including photographs, drawings, and interviews, that convey personal findings and statements on the connection between the photographic image and architecture, highlighting contemporary individual practices of architecture and photography and their perspective on the use of photography in architecture.

Last, a third method of formal analysis is applied on certain occasions where it is appropriate. This method will follow an analysis of the visual structure of the subject portrayed in the photograph and its formal connotations that are translated into an architectural practice. As explored in the method of categorisation the thesis adopts, images communicate ideas: however, on this occasion the images may communicate more literal information that can be adapted by the architect directly. This formalist reading of the image portrays the direct use of images as an influential element in design as much as the effect of the predominance of the image that can, either consciously or subliminally, influence the designer towards a formalist approach. Unlike earlier approaches of historical and cultural contextual analyses, this method will focus purely on what the viewer sees. This method will appear in the case studies where the issue of subject and form emerge in the examination of the relationship between image and architecture, or where the theory has a direct effect on the form rather than the process of design, providing an objective analysis in an otherwise interpretative association of visual and physical form between image and architecture.

While this last method is limited to the formal association between the visual form depicted and the architectural expression that stems from it, the first and second methodologies, on the other hand, rely more on formal analysis in the visual arts. Terms such as "composition" and "colour" were already being used to analyse paintings in the seventeenth century by the painter and critic Roger de Piles[3] and were used to divide the work of art into parts that could be deciphered in order to evaluate the work. Three centuries later, British art critic Roger Fry[4] further developed this methodological analysis, emphasising the formal properties of paintings over the aesthetic emotional response that art induces in the viewer, with the aim of offering an objective appreciation that could be experienced by everyone, independently of their background. Between the image and the architecture, through this

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[3] Roger de Piles, *The Principles of Painting* (London: Printed for J. Osborn, 1743).
[4] Roger Fry, *Vision and Design* (London: Dover Publications Inc., 1998).

systematic analysis of visual elements, in correlation with the historical and cultural background of the work, a critical evaluation can be supported that supersedes the boundaries of their subject.

Predominance of the image

In a collection of essays entitled *Modernity and the Hegemony of Vision* (1993), David Michael Levin pinpoints the issue of the privileging of the visual in modern culture and argues that "beginning with the ancient Greeks, our Western culture has been dominated by an ocularcentric paradigm, a vision-generated, vision-centred interpretation of knowledge, truth, and reality", followed by many questions surrounding the clarification of "modernity", "hegemony" and the links between vision and the social sciences. With the development of visual technology and a culture focused on communication and promotion, the phenomenon of ocularcentrism has become even more prominent in the last few decades, with signs that it will be pursued for many more years to come. It is within this spectrum that the research takes place, exploring the effect of photography within this phenomenon of the "predominance" of the visual in the last fifty years.

In the last few years of rapid technological growth and events that have shaped our "seeing", thought processes and perspectives have changed at an ever-increasing rate. Despite its central significance in our culture, and subsequently in architecture, there is scarce research on the subject and even less enquiry into its influence. In architecture, the image is used from concept to creation and beyond. It is the sketch with which the architect thinks, the drawing with which he communicates, the rendering that shows that which might become, the photograph that captures an instance of what has just been accomplished. The image is not only a tool that is used in design, but also both the thought and the outcome. Technological advancements have merely enabled more visual options in the architect's toolbox for them to think more vividly, create more quickly and visualise before making. Several concepts that would have taken centuries to appear are now emerging and re-emerging within the span of a few decades. Identifying the thought processes, how and why they change through notions within the disciplines of art and photography is critical at this point of continuous development, but also crucial is to consider the climate of indefinite post-modernism that architecture is experiencing.

Timeline

The emergence of the "predominance of the image" did not occur instantaneously with the development of new media technologies, but it can be witnessed as an extended development of socio-cultural, technological, and economic changes that led to an age of existential crises, mass

production and expanded access to knowledge. This was clearly a consequence of the industrial revolution and the technological advancements that resulted from the two World Wars, the fluctuations in the economy and workforce following World War Two, which allowed for a redistribution of wealth and the emergence of a more powerful middle class in both the United States and Europe, as well as the psychological impact that followed the war. The culmination of all these events was during the decades after World War Two, a key moment in the development of the societal changes we are experiencing today, shaping the role of the image, and especially photography. The speed with which photography creates images, its accessibility to a wide demographic and its visual impact have made the photograph into a representation of consumerism and democracy and a medium for promotion and advertising, and subsequently propaganda. The research inevitably addresses the effects of the World Wars, with their socio-political, cultural, and economic repercussions for society, and the role of photography within an architectural education shaped by an ideological reformation, both of which are still in some ways part of contemporary society.

The advancement of the media and of photography follows the same trajectory. We are currently witnessing vast technological changes and society's critique of them, welcoming them, rejecting them, and unknowingly succumbing to them. Between the 1970s and today, the impact of the image, aided by technological advancement, has disproportionately increased, fundamentally affecting society, culture, and the essential way in which we see. The thesis focuses essentially on a timeline that follows the great recession of the 1960s and the subsequent financial crashes of the '70s and '80s, moments in time when ingenuity and low-cost alternatives resulted in the preponderance of architectural concepts and the expansion of photography as a discipline. This is the backdrop that has not only coloured the climate within which the architectural concepts mentioned here have emerged and formed, but which also defines to a significant degree the current landscape in which this thesis has been written.

Photography has been chosen purposely as the main focus of the research; among all the mediums of depiction, photography is central to this technological and societal change, and it carries with it an elemental connection to future changes in architectural design. A type of image unlike any other for its dependence on the technical instruments used to "capture reality", the photographic image is one of the most controversial. Photography, with its history spanning roughly two centuries, is the visual medium that encapsulates all the socio-economic and technological changes of this period and continues to play a fundamental part in the historical development of the "predominance of the image". This is evidenced, first, by the longstanding debate on the status of photography as either fine art or a technical medium; second, by its continuous and widespread use by artists, scientists, journalists, and ordinary people, and third, by the role of the photograph in movements that formed in the 1970s and its increasing influence since then. The research, therefore, takes the 1970s as a point of departure for its exploration of the role of photography in the formation of our society, our consciousness and, above all, our way of seeing.

Since its invention in the mid-1820s, the photograph has gone through dramatic changes in the depiction of "reality" and the construction of the image. However, one subject seems to remain constant throughout its history – the built space. Initially, it was a matter of the stillness and physical presence of buildings, that could be clearly captured through the long exposures required by the early cameras. At some point, though, the built space became more than a documentary chronicle. Soon the subject of architecture became a category within photography, for the representation of buildings, interiors, and landscapes. Some architectural photographs have been taken for reference purposes, others for documentation, and many are used for promotion and advertising. A number of artists, however, began to see architectural photography as an expressive means to communicate ideas, to experiment with the presentation of the built environment and to critique its social impact on the modern urban environment. Since the 1930s, photographers such as Eugène Atget, Berenice Abbott, Walker Evans and Ed Ruscha challenged the established identity of architectural photography as journalistic documentation and paved the way for a fine art photography of architectural landscapes.

This photographic representation of architecture has for many years been a one-way medium of visual production; the architect designed and built, the photographer photographed, and the architecture was disseminated. Today, that the influence of the image has reached an unprecedented level, and this straightforward correlation does not apply any more. The photograph is used and re-used, it is ubiquitous and constant, and it exists before the architect conceptualises, during the designing and beyond the realisation of the project, invariably re-defining what it is we see.

Conclusion

The exploration of the predominance of the image and its influence on architecture is essentially an analysis of the connections between the visual and the practical, pursued here through the photographic medium. While the photography of architecture often incorporates elements of commerce and publicity, the fundamental influence of photography on the practice of architecture is seen to be achieved through the development of ideas. Accordingly, photography as an artistic discipline performs as an expression of imagination, creativity and, consecutively, conceptual ideas through the eye of the photographer. The type of photography that will be explored in this research is, therefore, the artistic depiction of space, an understanding and interpretation by the artist that offers a second reading of the spatial values designed by the architect. The communication of these values takes place between artist and designer, photographer and architect, through the influence of the image and its capacity to dominate.

Despite the existence of numerous theoretical analyses on the subject of the image and the photograph by theorists such as Roland Barthes and Jacques Ranciére,[5] research on the visual bearing has been restricted to the field of the arts. The only recent examinations are those by Michael Fried and John Berger,[6] which, however, do not formally approach the subject of architecture and the visual influence photography has on architectural development. Other singular theorists, such as David Campany, explore the subject of architecture in artistic photography, the depiction of space and issues expressed through an architectural and photographic medium; however, even in this context the influence of photography on architecture is unclear.

In this research, photography is approached as an active medium of change and a generator of "ways of seeing" that has not been encountered in any of the works that have analysed architecture as a photographic subject to date. Moreover, connections are drawn through a combination of methods and methodologies and specific categories of case studies that are not only contemporary but also make connections with theoretical ideas that have not been documented or substantiated in a similar approach. The research approaches architecture through the photographic medium, combining all these "ways of seeing" that offer an uncanny yet straightforward examination, proposing for the first time a "Bergeresque" perspective on architecture.

Seeing architecture through the theoretical approaches of Fried and Berger and through the viewpoints of the photographers analysed in this thesis expands the context in which the architectural discipline can be examined. It touches upon contemporary issues of ocularcentrism and the creation of visuals that are made with a sense of "to-be-seen", blurring reality and fiction, and placing excessive emphasis on appearance and the "image". Furthermore, the investigation enquires into the current changing culture of architectural practice, considering the way an ocularcentric focus, the advancing digital era, and shifting values create spaces that are seen rather than experienced.

The research aspires to present alternative ways in which artistic disciplines can add to the architectural discourse, while at the same time exercising caution in relation to the misuse of visual mediums that occur with overuse and lack of consideration. Through each case study a new association between photography and spatial experience is revealed, augmenting the architectural understanding of theories of space and vision, and thus contributing further ideas on how to design space. Eventually, the thesis proposes a change in the way we think of photography and how we use the photograph in architectural design, re-evaluating the role of the photographer in the architectural practice, promoting artist-architect collaborations and an interdisciplinary discourse on the understanding and design of space. Considering this new role of photography, the thesis tests the possibility of a revision of architectural theory of the last fifty years and proposes a brief summary of theories and their role in emerging architectural approaches.

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[5] To be explored further in the following chapter, "A brief overview of photography and its 'seeing'".
[6] Also, in the chapter to follow.

Chapter summaries

A brief overview of photography and its "seeing"

The thesis engages with the changing identity of photography from its original invention to more recent definitions of its role. Additionally, photography's changing nature is accompanied by several philosophical, societal, cultural, and disciplinary notions. This chapter attempts to provide a brief background on these ideas and the architectural context within which this research on photography is positioned. It introduces curators and writers that pose similar questions on the nature and direction of photography (through exhibitions and publications such as *Constructing Worlds: Photography and Architecture in the Modern Age* (2014), and *Camera Constructs: Photography, Architecture, and the Modern City* (2012)), architects and theorists (i.e., Mario Carpo, Peter Eisenman) on their perspective of photography from their architectural standpoint, and philosophers and critics (i.e., John Berger, Michael Fried) on the complexity of "seeing" and what that means for photography's disciplinary identity.

From Photography and Architecture to Photography in Architecture

While the previous chapter looked into the more theoretical aspects of photography, here the research examines the practice of photography from the perspective of the architectural discipline. It looks into the early uses of photography by architects such as Henri Labrouste in the 1800s and how its role in architectural practice gradually changed during Modernism and in later educational settings (i.e., Bauhaus). The examples selected here present an overview of the changing relationship between photography and architecture, a dynamic influence that goes both ways and shifts within a broader context of events that shape the world's perspective through technological advancements, industrial progress, and financial fluctuation. This chapter, together with the previous one, provide a contextualised setting for the following chapters to develop, delineating the gradual course taken by photography to achieve its disciplinary emancipation that will be investigated in further detail later on.

Reframing typology

Through its long history, architectural typology has been informed by various disciplines, and three distinct developments can be noted, the most recent being that of Aldo Rossi and its contextualisation by Anthony Vidler in 1976. Rossi's typological investigation of the urban landscape emerged roughly contemporaneously with the typological investigations of the photographers Bernd and Hilla Becher, in which architectural typology was defined through a photographic perspective. This chapter has a

twofold purpose: first, it introduces a dual approach to an ongoing investigation of architectural classification, presenting the methods and methodologies and the outcomes, and their point of intersection, and second, it introduces the emergence of the Düsseldorf School and the moment of photographic emancipation through this fundamentally architectural concern that will set the agenda for the following chapters. In both cases photographic practice was applied in one form or another to study architectural typologies of which the outcomes, while similar in subject, differed fundamentally in their reasoning and motivation. This subject has concerned architects for many years, but the photographic contribution of the Bechers is almost never considered as part of the theory of the architectural typology. However, this chapter aims to present not only the role of photography in the third emergence of architectural typology, but also how the emancipation of photography may reframe the "third typology" by considering the contribution of the Bechers to typological investigation, both as theory and as practice.

The ordinary and the vernacular

This chapter reviews the key investigations into vernacular architecture and its developing definitions through the seminal works *Architecture without Architects* (1964) by Bernard Rudofsky and *Learning from Las Vegas* (1972) by Denise Scott Brown, Robert Venturi and Steven Izenour. It explores the principal role that photography took in these investigations and juxtaposes it with other photographic investigations of the same theme from the perspective of art. Considering the role that Edward Ruscha and Stephen Shore played in the formation of the Düsseldorf School the thesis makes a detour to explore the photography of architectural landscapes in the United States, and in particular the counterpart of the architectural vernacular, the ordinary and the mundane, as explored by these artist-photographers. The vernacular, on one hand, and the ordinary, on the other, highlight two similar yet distinct subjects that informed each another through the photographic practices of both architects and artists. By reviewing these seminal architectural works from a point at which photography has become a recognised artistic discipline, the chapter presents the various elements that photography can provide for an investigation of the non-pedigreed architectural environment and the related architectural discourse.

Space of Absence

The concept of the human-space interrelation had a central role in the development of modern architecture and, as Michael Hays notes, following the early twentieth-century Frankfurt School there emerged a rigorously articulated "post-humanist" position within social philosophy. However, the investigation of this subject of presence or absence in space is current and ubiquitous in the use and

development of space, as observed by William Whyte, in his book *The Social Life of Small Urban Spaces* (1980), that blends anthropology and observation with urban and architectural design. On the other hand, the photographer Candida Höfer displays extensive research into this, beginning with her early work *Türken in Deutschland* (1972-79), an enquiry into the impact of ethnic minorities on the urban landscape that was later developed in her famous interior architectural photographs and her exhibition "Architecture of Absence" (2001). The chapter takes as its starting point the post-humanist subject as defined in modern architecture and questions the role of design in regard to the occupation of space and its representation. Kuehn Malvezzi's architectural work, focusing on space and exhibition, is analysed, and reviewed following a juxtaposition of Candida Höfer's and Thomas Struth's work, both of which question the relationship between space, people, and presence. On the one hand Höfer adopts the role of depicting presence through absence, and on the other, Struth, in his *Museums* series, depicts an absence of human presence despite including people in his photographs. The chapter explores the different ways in which architects attempt to design and represent space with the human presence in focus and the various means photography employs to do the same, proposing the interdisciplinary application of these methodologies and where one may learn from the other.

(Un)Realism

The Herzog & de Meuron Elbphilharmonie project is one that is fraught with notoriety, but that also inspires awe. Here, it introduces the idea of constructing and communicating architecture by subverting reality. The chapter departs from the misunderstanding that photography represents the "real" and examines how architects and photographers take advantage of this misconception to further their designs. It explores the reasoning for, and application of, architects' choice in using photographic manipulation to alter the photographed environment in order to create a new one and attempts to see how these affect other facets of the architectural discipline including its economic and political role. The chapter focuses on the 2006 photograph of the Elbphilharmonie building that was constructed many years later, only to be already familiar when it appeared by many who were following the architectural developments. On the other hand, Andreas Gursky took a monumental project in Paris, the Montparnasse housing estate, popularising it through a fictional representation of it. The image of the Elbphilharmonie is explored through the impact it had in terms of constructing a fictional reality that became instrumental in its eventual realisation. It is then used as a way to further explore the historical moments that resulted in its monumental presence at the beginning of the twenty-first century influencing the public and mobilising an economic endeavour overcoming various obstacles. In contrast, the Montparnasse photograph becomes a source for investigating the photographer's instrumentality in creating new landscapes and architecture. Exploring other artistic and conceptual practices, the Montparnasse photograph establishes the way in which photography as

art changes the viewer's perception of architecture and presents its own capacity to create new spaces that question the viewer's ability to discern and evaluate the real from the fictional.

Abstraction

This chapter approaches the investigation of the abstract as a distinct form and practice of developing architectural concepts. It investigates what the abstract represents in other fields, such as art, and in particular photography, and then explores its definition and use in architectural theory and practice. The exploration begins with examples of abstraction, both conceptual and built, in the 1920s with Modernist projects by Le Corbusier (Maison Dom-Ino) and Mies van der Rohe (the Farnsworth house) and is revisited again in more recent developments through an example of architectural abstraction in the form of Ryue Nishizawa's Teshima Museum. Juxtapositions of these architectural projects are echoed in photographic examples, first in Thomas Ruff's *l.m.v.d.r.* (2001), photographs of architecture by Mies van der Rohe, and second in Luisa Lambri's *Interiors* series. Through these correlations the chapter investigates representations of architecture and space that are less definitive, exploring architectural intentions that can only be expressed through abstraction. Here, architecture is seen on the one hand from the perspective of abstraction as a concept that embodies architectural paradigms and on the other as a process of representing and developing a concept. The chapter is applied as a further exploration of the capacity of photography that began with the Düsseldorf School's methodological process, but which saw even further development in the work of more recent artists. The photographic methods and manipulations of light presented here provide messages and interpretations that have varying connections to the subject photographed. Space is "read" by immaterial elements and communicates ideas very similar to conceptual designs. The varying amount of information and the visual expression of the subject create notions of experience which are translated to architectural design. This is communicated through an abstraction of space: its values and identity that the artists distinguish and share with the viewer, bringing focus to spatial qualities that can only be seen through a method of subtracting information in order to foreground other underlying messages. Through the analysis of these works the research explores the messages portrayed and how these depictions affect architectural design to create alternative spatial understandings.

Conclusion

Finally, the research reviews these twofold positions and presents the changes that the emancipation of photography has brought about in the development of architecture since then. It accounts for the various possibilities that arise through this new perception of photographic practice as seen through

each case study and proposes a renewed evaluation of the role of photography in architecture. By considering the impact that the photograph, and consequently the image, have in the architectural discipline it shows that a re-established focus needs to be directed towards the theories of the visual and that of art photography in order to further develop, and perhaps resolve, some of the issues that exist in contemporary architecture.

A brief overview of photography and its "seeing"

Figure 1. Andreas Gursky exhibition at the Hayward gallery, London, 25.01.2018 - 22.04.2018. View of Andreas Gursky, Turner Collection, 1995. Photograph by author.

Today

Numerous books, lectures, and exhibitions have taken place in the last decade on the subject of photography and architecture.[1] Some tend to delve deeply into the intricate nuances of meaning and concept, others skim the surface, focusing on its visual and sensationalist effects, and many gravitate

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[1] Some prominent examples include: Andrew Higgot and Timothy Wray, Camera Constructs: Architecture and the Modern City (London: Ashgate Publishing, Ltd., 2012), Elias Redstone, Shooting Space: Architecture in Contemporary Photography (London: Phaidon, 2014), Alona Pardo and Elias Redstone, Constructing Worlds: Photography and Architecture in the Modern Age (London: Prestel - Barbican Art Gallery, 2014), Valerio Olgiati, The Images of Architects (Ennetbaden: Lars Müller Publ., 2013). With the exception of Cameera Constructs which was the publication of a conference, the following publications were on exhibitions that will be expanded on further on.

towards somewhere in between.[2] Their timing reflects the growing preponderance of visual imagery that infiltrates our culture and society. Our dependence on monitors and screens, on visual content and its promotional capacity, drives us to question what this visual hegemony is doing to our perception of space, to our understanding of architecture and consequently to the development of architectural thought and practice. However, in this case it is not so much "what" this growing publicity attempts to achieve but "why": why is it important to study the influence and effects of photography within architecture? These books and exhibitions reflect the growing interest in the relationship between photography and architecture, a subject that architects and theorists have certainly been aware of from the early invention of photography; but have only recently begun to realise the importance of its implicit role in architecture's latest developments. As architects who have grown up and been educated within this visual culture it requires a very large step backwards in order to see photography's silent yet impactful role without being side-tracked by its captivating image.

The role of photography in architectural discourse has gained momentum in the last couple of years, with a renewed interest in the photography of previous decades.[3] Unlike the discussion on the subject on previous occasions,[4] however, this time the intersection of photography and architecture is approached in a rather more inquisitive manner, indicating a questioning of pre-established notions and the consideration of our current ocularcentric society. One of the key subjects that have recently been addressed is the ambiguous territory of "architectural photography".[5] This type of photography usually refers to the photography of buildings and structures, and it is not always clear whether it has been produced as an "image-dialectic", a documentation, or even promotional material. Instead, the recently emerging term "photography of the architectural landscape" is most often encountered in the analysis of art photography involving this type of "image-dialectic" and is the main subject around which these discourses revolve. The term "landscape" in this case encompasses various forms of architecture and spaces, and is not limited by the term "building" as a form. In Akiko Busch's *The*

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[2] The variation in the approach to photography, as will be often encountered through the thesis, is a direct result of its fluctuating identity between being a device and an artistic medium. Its artistic emancipation, as explored later on through Michael Fried's work, distinguishes the different values of the latter which presents an opportunity for reassessing its previous undertakings under this new light.

[3] This is derived from the aforementioned publications as well as a growing interest in recent years resulting in exhibitions of artist photographers that focus on the built environment, with exhibitions in London alone that included Hélène Binet's 2021 "Light Lines", Candida Höfer's 2019 "Showing and Seeing", Andreas Gursky's 2018 "Redefining Photography" etc. with "Constructing Worlds" in 2014 setting the context of critical debate about the roles of architecture and photography with works going back to the 1930s.

[4] Artistic explorations of architectural space such as those by Eugene Atget and Berenice Abbott, and through groups/movements such as Group f/64 and New Topographics had limited attention paid to them in the architectural discourse, that is until *Learning from Las Vegas* (1972) and the more recent interaction between photographers and architects that is explored in following chapters.

[5] Architectural photography, meaning the photography of architecture (most often with documentary and promotional purposes) is examined by both the curators and the artists mentioned here through its artistic identity.

Photography of Architecture: Twelve Views (1987),[6] Ezra Stoller's photography is characterised as documenting "the radical changes in the architectural landscape", referring to all scales of architecture; landscape, urban and buildings. This reference to landscape also recalls J.B. Jackson's broad definition that encompasses all human-made surroundings.[7] Photography of landscape looks at landscape as a discursive construction; it assigns meaning and significance to land; the landscape is not natural, but is a cultural construction. How artists have chosen to photograph land reflects different historical and social values, hopes and fears. The photographic exhibition curated by William Jenkins at George Eastman House in 1975 presented various depictions of the American landscape and was titled "New Topographics: Photographs of a Man-altered Landscape", reflecting Jackson's definition of landscape.[8] Following this line of thought, the photographic depiction of architecture is too narrow a term for the purposes of the research mentioned here and "Man-altered Landscape" is replaced with "architectural landscape" to give emphasis to the distinction between "architectural photography" and "photography of the architectural landscape".

Figure 2. Constructing Worlds exhibition, Barbican, London, (25 Sep 2014 - 11 Jan 2015). View of works by Nadav Kander. Barbican archive.

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[6] Akiko Busch, *The Photography of Architecture: Twelve Views* (New York: Van Nostrand Reinhold, 1993), 14.
[7] John Brinckerhoff Jackson, *"The World Itself."* In *Discovering the Vernacular Landscape* (New Haven, CT; London: Yale University Press, 1986), 1-8.
[8] Robert Adams, University of Arizona, Center for Creative Photography, and International Museum of Photography at George Eastman House, *New Topographics* (Tucson, AZ; Rochester, NY; Göttingen: Center for Creative Photography, University of Arizona; George Eastman House International Museum of Photography and Film; Steidl, 2009).

In 2014, the exhibition "Constructing Worlds: Photography and Architecture in the Modern Age"[9] at the Barbican Art Gallery touched upon this ambiguity between architectural photography and landscape. The exhibition, accompanied by a publication of the same title, presented a wide array of "architectural photography", with eighteen famous photographers tracing the history of architectural representation through the photograph. The aim of the curators, Alona Pardo and Elias Redstone, as is mentioned in the foreword to the publication, was to reveal the underlying messages that emerge from this architectural photography. Spanning different periods, photographic methods, thematics and so on, the exhibition provided brief glimpses into a variety of different ways in which photography might interpret, or even decipher, architecture. Both the exhibition and the publication, in attempting to cover a broad view of different approaches, skimmed over these notions, and focused on presenting the impact of these curated photographic artworks within the concept of "constructing worlds" to the viewers. The works are, thus, generally seen out of context and with brief explanations of their unique artistic intention there was no space to delve further into the more nuanced relationship between architecture and photography. It has become an example of an assumption that exists in this discussion of architecture and photography, that photography and architecture influence each other, here photography taking up the role of architecture and "constructing" visual worlds as architecture constructs physical space. Following this acknowledgment, however, the detection and identification of the influence becomes another matter altogether: photography is approached using architectural language and comprehension and is viewed as a visual substitute for architecture's role. Essentially, what the visitor gains is, if not at first glance, that "photographs aid or manipulate the ideological underpinnings of architecture; the way buildings – even if uninhabited – physically perform value",[10] that photography has the distinctive capacity to draw meanings from architecture and focus discussions on parts of the architecture that certainly do not define its entire identity. Architecture, however, retains the authority in this discussion, being the driving conceptual force that photography edits and curates.

The exhibition signified a general climate that has characterised the last few years in regard to architecture and its representation. It followed the increasing presence of architectural visualisations, renderings and photomontages that challenged reality and the role and identity of architecture. It also presented through individuals a distinct attempt on photography's part to analyse and question this broad phenomenon of ocularcentrism, bringing to the viewer's attention the importance of such works of art and the necessity for further and deeper exploration of what is only hinted at in the exhibition. Redstone's other work, such as his book *Shooting Space*,[11] continue this form of architectural critique

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[9] Alona Pardo, Elias Redstone, and David Campany. *Constructing Worlds: Photography and Architecture in the Modern Age* (London: Prestel; Barbican Art Gallery, 2014).

[10] Ruth Rosengarten. "Constructing Worlds: Photography and Architecture in the Modern Age." *Photography and Culture* 8, no. 3 (September 2, 2015): 367. https://doi.org/10.1080/17514517.2015.1091185.

[11] Elias Redstone, *Shooting Space: Architecture in Contemporary Photography* (London: Phaidon, 2014).

through the photographic medium. Such publications focus on the works of earlier artists, as well as more recent ones who, however, follow a similar approach, such as the objective view characteristic of the Düsseldorf School of Photography, raising questions about the language used to discuss architectural matters, within both architecture and photography.

Another publication, this time a collection of papers presented at a 2006 conference, gives further clarity to the questioning role of photography within architecture. *Camera Constructs: Photography, Architecture, and the Modern City,*[12] like the previous examples, follows a thematic organisation but uses a case study method to present the influential role of photography in a case-by-case scenario. Focused towards a more specific audience, who are invested in this subject matter, the publication expands further on the nuances of photography as a technique, its adoption in architectural practice and the outcomes of its implementation. From its own perspective it acknowledges Modernism as a specific moment in architectural history that was particularly influenced by the presence of photography through examples such as Le Corbusier's relationship with photography and its role in his development as a key Modernist architect, the employment of photography in architectural practices, photography as a means of experiencing and understanding the built environment and, what might be considered to be most closely related to this thesis, photography as a medium of interpretation. Unlike "Constructing Worlds", the examples presented here present the broader capacity of photography to process architectural subjects, both artistically and technically. It also suggests that the ongoing relationship between photography and architecture is a subject that has been present throughout some of the most seminal moments in architecture's history yet has been largely overlooked until the recent emergence of interest in the subject.

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[12] Andrew Higgot and Timothy Wray *Camera Constructs: Architecture and the Modern City* (London: Ashgate Publishing, 2012).

Figure 3. Valerio Olgiati, "Pictographs – Statements" installation, 13th Venice Biennale, 2012. Photograph by Thomas Wagner, Stylepark.

Another example that highlights this overlooked influence is the work of architect Valerio Olgiati, most notably in his book *The Images of Architects*.[13] Through this project, that also took the form of an exhibition at the 2012 Venice Biennale, Olgiati explores the role of vision and perception in architectural thought and design, and most specifically the role of photography in the formation of these. By conversing with architects and gathering images that they consider had a central role in the formation of their work, he presents a relationship that fluctuates between image, concept and practice, and the inherent adoption of a visual medium in architectural practice that in many cases is open to interpretation. What appears to be the core concept of Olgiati's approach is that a single image has the potential and the force to lead a concept, and subsequently influence architecture. This idea not only appears as an experiment in this project and publication but also drives his other projects such as his discussion of what he terms "non-referential architecture"[14] and his conversation with photographer Bas Princen.[15] Olgiati represents what previous authors and curators have been advocating for, an architecture that questions its boundaries and acknowledges its visual counterpart,

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[13] Valerio Olgiati, *The Images of Architects* (Lucerne: Quart Publishers, 2014).

[14] Valerio Olgiati and Markus Breitschmid *Non-Referential Architecture* (Zürich: Zürich Park Books, 2019).

[15] Pedro Leão Neto, "About the Book of Valerio Olgiati - Bas Princen, a Talk on Architecture in Photography", *Sophia Journal* 5, no. 1 (2020): 96–103.

an aspect of architecture that can be either complement or jeopardise it, as David Campany mentions in his essay "Architecture as Photography".[16]

In just a few years, through various exhibitions, projects, and publications, the interest in, and focus on, this intersection of image, photography, and architecture has thus developed significantly. In a way it reflects the cultural and technological state of this period, an increased absorption in all aspects of vision, whether in the form of ubiquitous and pervasive social media, new emerging and developing technologies of visual management and representation, or the well-established visual link between commercialisation and capitalism. Yet, as these latest reflections attempt to investigate this phenomenon it is important to look back to periods when such developments were at an early stage, but which already hinted at the fundamental and deeply influential changes that would take place. At the same time, they explore and reflect what has always been an inseparable part of architecture, its image. Similar to the way this investigation began, it is not so much "what", but "why" this re-emergence of interest in the visual and architecture has become such an expanded topic.

Interdisciplinarity and shifts in architectural theory

"Architects occasionally borrow, adopt, adapt, or improve others' ideas - ideas that originally had nothing to do with building".[17]

With these words Mario Carpo opened his 2005 paper "Theory, Interdisciplinary and Methodological Eclecticism", in which he reflected on the interdisciplinary nature of architecture, with the aim of defining the entire history of architectural development, whether in theory or practice. In his essay, Carpo argues that the inherent nature of architecture can be linked further back to Vitruvius' definition, and that in order to understand a particular architectural subject it is necessary to look beyond to other disciplines and practices.[18] Even then, Carpo notes, the researcher needs to realign themselves with the area and direction of enquiry, but is never able to grasp the subject in its entirety. With this thought in mind, the following research attempts to pose alternative ways of considering

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[16] David Campany, "Architecture as Photography: Document, Publicity, Commentary, Art". In *Constructing Worlds: Photography and Architecture in the Modern Age,* 27-39.

[17] Mario Carpo. "Theory, Interdisciplinary and Methodological Eclecticism," *Journal of the Society of Architectural Historians* 64, no. 4 (2005): 425.

[18] Vitruvius advocates for a broad knowledge on various subjects, in Vitruvius Pollio, "The Education of the Architect", ed. Ingrid D. Rowland, Thomas Noble Howe, and Michael Dewar in *Vitruvius: Ten Books on Architecture*. (New York: Cambridge University Press, 2001), 21-24, sharing Pythius' opinion on this including all the arts and sciences, in Frank Granger, "Vitruvius' Definition of Architecture." *The Classical Review* 39, no. 3/4 (1925): 67–69.

how a number of architectural ideas, theories and practices developed, without excluding other sources or approaches, or insisting on the absolute legitimacy of these statements. Instead, it acts on the idea of architectural interdisciplinarity to explore the ways in which other disciplines may have had an active role in the formation of, or advancement of, architectural subjects of enquiry. Exploring other disciplines and expanding the field within which architecture can source new information acts as a "means of innovation" and broadens the borders of the architectural discipline.[19]

The history of photography is one such example that has, both alone and as part of a wider visual shift, affected architecture. Looking at architecture through the lens of the history and theory of photography it may be possible to reveal the ideas architecture borrowed, adopted, adapted, or improved on. Carpo identifies that the role of the image in the architectural discipline has had an instrumental role in the ways it was formed, as a means of visualisation, perception, or dissemination. In his *Architecture in the Age of Printing Orality, Writing, Typography, and Printed Images in the History of Architectural Theory* (1998) the importance of the image is described as an element that defined the way architecture is understood today and how it has become part of its cultural development. Additionally, Carpo introduces concepts such as the apparatus, the mechanical, and technological aspects that comprise the subject of the image and its use or application that organise the discussion of the image into separate chapters according to type, application, medium and other forms it takes. In parallel with the events that take place in regard to the image, architecture shifts accordingly, changing its methods, methodologies, and views. This detailed view of the general subject of the image shows, on the one hand, the very influential role of the image, while on the other hand, it indicates that each distinct aspect of the image has had its own separate role in this.

This exploration into architecture's transdisciplinarity, while broadening the horizon of the field of research, also affects how architecture is perceived in terms of its definition and as a discipline. It "displaces the production of built form as the prevailing mode of practice"[20] and introduces a more nuanced notion of architecture as a medium for spatial investigation. As a result, with every addition to architecture's trans-disciplinary nature, architecture shifts and evolves. Technological advancements such as printing or photography act like small stepping-stones to this evolution. Photography, however, with its more recent history and a definition that is still developing, is a subject that has been a complex area in relation to transdisciplinary architectural investigations, as will be presented through examples from this point onwards, and even though it is of increasing interest in architectural discourse today it is very rarely considered as a distinct part of this transdisciplinary intersection. Despite Peter Eisenman's statement that architecture is experiencing a

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[19]Anthony Vidler. "Architecture's Expanded Field." *Artforum International*, 42, no. 8 (2004): 142.

[20] Courtney Foote, John Gatip, and Jil Raleigh, "Transdisciplinarity + Architectural Practice." *Inflection* 3 (2016): 6.

paradigm shift from the mechanical to the electronic[21] – he compares modes of visual reproduction linking photography with the former and the fax with the latter – the mechanical still remains an area that has yet to be explored fully, and in particular photography and its contribution to architecture. Of course, Eisenman refers to photography here as a medium of visual reproduction, as part of a discussion on different ways of seeing and understanding between the former mechanical form of visual reproduction and the latter electronic form. What is not as clear, however, and this is mostly due to the way photography has been largely viewed, is how photography as a distinct practice of analysis, investigation and communication can contribute to these discussions on seeing and understanding.

Eisenman observes that a pivotal moment in the disciplinary direction of architecture took place in the years following World War Two, linking it at the same time to changes happening in the realm of the image and its "reproduction" – which explains his mention of the fax machine, which was commercialised in the 1960s. As Eisenman points out, this paradigm shift is part of a more general shift in our "ways of seeing" that has resulted from technological developments and an increased visual ocularcentrism. Eisenman also mentions the failure on architecture's part to adequately investigate vision and its associated concepts, resulting in the persistence of anachronistic views and its confinement to simplistic definitions of seeing as interior versus exterior, "concretising" vision and responding to it through conservative notions. Even though Eisenman's focus here is on the shifting relationship between "seeing" and technology, and subsequently vision and architecture, photography is, even though it is briefly mentioned, seen to have played a distinct role in the changes that are taking place, both technologically and culturally, and at the same time some inconsistencies or anachronisms in its definition also seem to arise.

Today we see even more strongly the effect of the virtual, digital, and other visual turns architecture has made, but these changes stem from a more fundamental turn that took place in the 1940s and 1950s, and perhaps even earlier. Going back to that period, it is evident that technology and other societal, cultural, and economic developments influenced the direction architecture followed, either as practice or theory. Architectural historian Reyner Banham, who captured these years of the early twentieth century, explained how new technological inventions, artistic responses and an emerging consumer democracy reframed architectural design.[22] The two Machine Ages, the first covering the early twentieth century and overlapping with the second Industrial Revolution and the second beginning with the Digital Revolution in the latter half of the century, posed fundamental changes in the world that influenced architectural movements in their own way. These are what Eisenman refers to, in other words, as the shift from mechanical to digital. For Banham they are what

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[21]Peter Eisenman, "Architecture After the Age of Printing", in *The Digital Turn in Architecture 1992-2012*, ed. Mario Carpo (Chichester, West Sussex: John Wiley & Sons, 2013), 16.

[22]Reyner Banham, *Theory and Design in the First Machine Age* (Oxford: Butterworth Architecture, 1960).

defined the emergence of the Modern movement, and later on were what his student Charles Jencks used to frame the emergence of Postmodernism. While the automobile, advertisements and, indeed, the camera, altered the atmosphere in which architecture was practised, they also altered the way it was perceived, creating new norms of communication, drawing, and construction. In his *Historian of the Immediate Future* (1987), Banham links these technological and societal changes to the emergence of the different movements seen in architecture during these years. In conjunction with intermittent economic fluctuations, developments taking place in architecture are also seen to have responded with new viewpoints and innovations. The economic miracle of the 1950s led to increased demand for design and construction, evidenced by the increased growth in the United States but also in other parts of the world, if on a smaller scale. The crash that followed in the early 1960s, and afterwards in the late 1970s, introduced alternative avenues for practising architecture, borrowing methodologies from the arts and advertising. As a result of these economic ups and downs architecture was faced with the question "what is architecture?".[23] Visionary architecture began to gain prominence as a form of architectural practice and investigation, engaging more with the two-dimensional presentation of architecture to critique, comment and produce new architectural ideas. What seemed radical in practising "paper architecture" later in the 2000s it became a recognised form of architectural practice, and the experimental work of these "future" architects[24] such as Lebbeus Woods, Archigram and others has become an important moment in the history taught as part of architectural education. Their work is a commentary on capitalism, but the technological renaissance experienced in these decades also signalled a fundamental shift in the nature and definition of architecture that resonated for years afterwards. Even more recently, in the 2010s, the saturation point reached in the architecture profession has turned many architects towards other areas of practice within the design field, such as photography, film or digital design.[25] This shows the visual turn architecture has taken, employing the increasing facility of using mediums of visual production and presentation, using print and photography to disseminate their work, and later moving from the drawing board to the computer screen. These technological advancements gradually transposed our perceptions from the physical to the virtual, whether that was initially mechanical or, later on, digital, during which time architecture shifted direction in the ways in which it was understood and practised. Throughout this brief but rich historical change, architects and theorists have questioned and critiqued

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[23] Hans Hollein, "Was Ist Architektur?" *Protokolle* '66-69. Wiener Jahresschrift Für Literatur, Bildende Kunst Und Musik, (Vienne-Munich: Jugend und Volk, 1966).

[24] By "future" denoting a new form of architect who practices architecture in a different way to what was being seen until then. Dominique Rouillard, Christina Contandriopoulos, and Anthony Vidler, "Superarchitecture: The Future of Architecture 1950-1970," *Journal of Architectural Education*, 67, no. 1 (May 25, 2013): 119–21.

[25] Although here this is referring to a migration that is mostly to other visual areas, the shift in practitioners and also theorists who have studied architecture towards other disciplines is a phenomenon which is touched upon in recently. See: Harriet Harriss, Rory Hyde, Roberta Marcaccio, *Architects after Architecture: Alternative Pathways for Practice* (London; New York: Routledge, 2021).

this engagement with visual mediums,[26] but as Eisenman mentions, while adopting these new methods, architecture still remains some way from developing its fundamental notions of vision. Whether this is due to the speed of development (technologically and theoretically), or is an attempt to retain a form of independence as a discipline, the learnings about architectural space through visual methods have been progressing in other disciplines and in some instances, as will be shown in the following chapters, have contrived to infiltrate architectural theory and discourse.

Photography in a capitalist society

Despite the limited scope with which architecture deals with notions of vision, the inherent relationship with these understandings of vision, seeing and visual reproduction are nonetheless an essential part of the development of architecture. The discussion that arises from Eisenman's analysis of the shift in architecture during this time only furthers the prominence of the relationship between these visual notions and architecture. It responds to a predominance of the visual that emerged gradually through new technological inventions that initially promoted visual reproduction, and then an accelerated dissemination of visual material. This phenomenon is what David M. Levin describes as the "hegemony of vision", a cultural phenomenon that is closely linked to Western ocularcentrism, in which vision is both primary and predominant.[27] The definition of the hegemonic status of vision is used by Levin to demonstrate the problem that arises from such predominance, an undisputed "vision-centered interpretation of knowledge, truth, and reality".[28] While Eisenman notices a shift in how vision was understood and reproduced in the 1940s, Levin identifies an even more fundamental shift in the history of vision that began with its prevalence as the more dominant sense. Levin locates this shift in the Renaissance, during the beginning of what he defines as "modernity" that arose with a renewed sense of "perspectivism and the rationalisation of sight"[29]. Both shifts together present a

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[26] Kenneth Frampton expresses his opposition to an increasingly visual architecture in Kenneth Frampton, "Towards a Critical Regionalism: Six Points for an Architecture of Resistance", in *The Anti-Aesthetic: Essays on Postmodern Culture*, ed. Hal Foster (Port Townsend, Washington: Bay Press, 1983), 16–30. Other critiques on the subject are voiced by architectural theorists and historians in Hal Foster, *The Art-architecture Complex*, (London: Verso, 2013) and Gevork Hartoonian, *Architecture and Spectacle: a Critique* (London: Routledge, 2016).

[27] The thesis focuses for the most part on the visual predominance defined and developed in the West through the creation of the camera in Europe, the cultural spread of US media, and their roots in classical Greek notions of the nobility of the visual senses, Descartes' concepts, ie., his 1637 *Dioptric*, and the Enlightenment's preoccupation with the visual. Other international notions have unavoidably shaped ocularcentrism today, yet the largely European subjects (German photography movements) and its cultural colonisation explored here is best defined by this Western understanding.

[28] David Michael Levin, *Modernity and the Hegemony of Vision* (Berkeley: University of California Press, 1993), 2.

[29] Ibid.

juxtaposition of forms of visual reproduction during these two moments: one was painting, that saw significant development and high status during the Renaissance and the other was the emergence of mechanical visual reproduction, that began to be developed more widely in the years following World War Two. Both shifts, equally, are seen to have had a ripple effect in other areas of thought and discourse that define their periods respectively, and in architecture in particular the ideas developed through visual representation and the architectural developments of the time – associations that arose through architectural perspective drawing and the Modernist plan and elevation respectively – present a deep-rooted connection between vision and architecture.

As is seen in Eisenman's writing, and further pointed out in Levin's writings, this emergence of visual predominance comes with both benefits and issues. In particular, when the discussion focuses on the subject of photography and vision, where the camera as an instrument enables the mechanical reproduction of what is considered to be real and produces "instant copies" of this reality, photography itself begins to become a subject that raises "problems, aesthetic and moral".[30] Susan Sontag, as part of her interest in the complex nature of photography, compiled a series of essays focusing on the issues that follow the presence, development and the "omnipresence" of photography. In *On Photography* (1977) Sontag identifies the particular role of photography in contemporary capitalist societies. Like Levin, Sontag identifies the hegemonic nature of photography as it "has become one of the principal devices for experiencing something":[31] it is prevalent, ubiquitous and has become indispensable in representing truth, reality and bringing closer that which might not be within easy reach. At the same time, Sontag recognises that photography can alter truth, and misrepresent reality, and may distance the individual from the experience of witnessing the actual. In the essays, many of these facets of photography are also seen to be a reflection of society, its industrialisation a parallel to bureaucracy, its direct depiction and facility of production allowing for mass consumption without critical thought, an "aesthetic consumerism to which everyone is now addicted". This pervasiveness of photography in everyday life and its consumption positions photography as a medium of "unlimited authority",[32] transforming it into a tool that can change perceptions and alter the direction of ideas.

In a similar manner, in a more recent analysis of photography in the context of culture, Allan Sekula depicts photography as "modernity run riot".[33] Sekula views photography as a force that has the power to alter, or in this particular case enhance, the development of culture, either for better or for worse. In *The Body and the Archive* (1986) Sekula suggests that photography is both a promise and a threat. Photography is one of the main elements contributing to the increase in images and the resulting mass culture, consumerism and all the other cultural facets of capitalism that are based on

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[30] Susan Sontag, *On Photography* (London: Penguin Books, 1977), vii.
[31] Ibid., 7.
[32] Ibid., 120.
[33] Allan Sekula, "The Body and the Archive." *October* 39 (June 1, 1986): 4. https://doi.org/10.2307/778312.

image. Through these social and cultural facets, the photograph both consciously and subconsciously pervades all areas of our daily life. The elements that Sontag acknowledged in the photograph and its potential that led to her fascination on the subject are also seen in Sekula's approach: he identifies its contradictory ability to both promote and incite, to be used as a medium to pacify, to excite, to honour, but also to repress. Recent examples of this can easily be found: photographic images have given cause for, or incited, actions, such as Nick Ut's 1972 photograph of the girl injured by napalm in South Vietnam. Sekula draws attention to the bourgeoisie instead, who are the main audience for this photographic material. Through the photograph they are able to see and experience other areas of the world and life, they are confronted through this with what is understood to be "the truth". In a way, photography might be seen then as a tool, a medium by which other powers control the outcome, which in fact can also be said of painting and writing. Photography possesses its own kind of expression that is inherently based on the notion of "truth", which in turn is considered in contemporary society to be a driving force for power, whether this means to discover it, unveil it, alter it, or hide it. Therein lies the social, cultural, and political power of photography that Sekula expands on in his text through various historical examples and analysis and that Sontag describes as the means that allows one to experience "knowledge – and therefore, […] power".[34]

Photography is, therefore, a subject that cannot be taken outside of its socio-political and cultural context. It is within this context that we can come to understand its identity and its contribution to other areas which are also part of this context. Similarly indefensible are the notions of reality and truth that are closely linked to the practice of photography. In relation to this link, the misconception that reality is the author of the photograph, and the photographer merely part of the mechanism that captures it, has for a long time meant that the discussion of photography has been explored in ways that painting was always discussed within the realm of art. This relationship of photography to reality and truth and its identity as art are among the main elements that have defined photography in its brief history and that are fundamental in understanding its influence on other disciplines. The comparison between painting and photography has produced many interesting outcomes, but also many issues. For one, its ability to "capture reality" – a statement which is always in doubt and subject to circumstances – is one of the main reasons that has set photography and art apart. Furthermore, the concept of "capturing" a subject transforms the photograph to an "extension of that subject"[35] instead of a representation of it, which would naturally be the interpretation of a painting. However, setting aside these notions and looking at the wider capacity of photography allows not only the qualities that make photography artistic, but also its status as an independent art form, to surface.

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[34] Sontag, *On Photography*, 2.
[35] Ibid., 121.

Photography's changing identity

To say that photography has not been considered an art in the past would be greatly misleading. In fact, several great photographers in the history of the medium have been known as "artists" on account of the nature of their work,[36] while there are historical examples of photographic exhibitions – albeit small and rather informal – by artist-photographers such as Alfred Stieglitz, a modern art promoter in the 1920s. Many of the photographers who are now considered to have produced art, though, were in many cases not thought to be doing so at the time: their work was seen in general as individual explorations, lacking the recognition artists enjoyed in other fields. Walter Benjamin expresses this approach toward photography in his essay "Little History of Photography"[37] (1931) in which he considers the development of photography, beginning with the fascination people had with the invention of the camera and continuing through a series of experimentations, both technical and aesthetic. A new invention, new ways of seeing and representing, photography is seen here to be an uncharted land that is being explored without a clear guide, at times taking cues from its closest relative in the visual arts, painting, and at others attempting to create its own identity. And as a fledgling practice, photography faced many opposing opinions, some considering it a new form of art and others condescending this notion – for its "accurate" representation of the subject could not be compared to the expressive nature of painting, as Benjamin noted towards the end of the piece, citing Baudelaire's *Salon of 1857.*[38] As Benjamin's title indicates, his essay briefly depicts the early development of photography and introduces the environment in which photography emerged and the various aspects that distinguish it from other visual forms of representation, and which have inspired many philosophical debates in the arts. Throughout, there are questions on what photography entails, preconceived notions of reality and fiction and the role of photography in this, as well as a discussion on its dependence on technology, which is a large part of what defines this practice. He introduces concepts that form a large part of his later well-known text *The Work of Art in the Age of Mechanical Reproduction* (1936) in which he delves deeper into the various aspects of photography.

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[36] Ansel Adams and Cindy Sherman are among the earlier examples of such photographers that are termed artists, as seen in Rebecca A. Senf, *Making a Photographer: the Early Work of Ansel Adams* (New Haven, CT: Yale University Press, 2020), and Cindy Sherman, Rosalind E. Krauss, and Norman Bryson. *Cindy Sherman 1975-1993* (Munchen: Schirmer / Mosel, 1993).

[37] Walter Benjamin, "Little History of Photography." In *Selected Writings Volume 2* 1927-1934, ed. Michael William Jennings, Howard Eiland, and Gary Smith (Cambridge, MA: Harvard University Press, 1999), 506–31.

[38] Ibid., 527. Baudelaire's Salon of 1859 was first published in the *Révue Française*, Paris, June 10-July 20, 1859. This selection is from Charles Baudelaire*, The Mirror of Art*. Jonathan Mayne editor and translator. (London: Phaidon Press Limited, 1955).

Looking into both the artistic and technical aspects of photography, Benjamin uncovers the complex nature of photography early on, but also its ability to prompt a re-examination of subjects thought to be well established. Instead of attempting to give an answer to whether photography is art, he questions whether photography has transformed art. Considering the camera as a tool for reproduction raises the question of whether a photograph is really a reproduction of what it captures and whether this reproduction could ever be considered a work of art. For if the scene, space, or subject that is photographed is a reproduction, what does that mean for the subject, its authenticity and originality? For the first time, the medium of production incorporates a mechanical process and a technological capacity, meaning the photographer has only a certain degree of authorship: Benjamin compares the photographer at one point to a conductor with a baton.[39] The position of the photographer is very different from that of a painter or a sculptor, whose interaction with their material is much more immediate. On the other hand, its technological reproducibility allows for a more collective response, relating it to the masses at large. Through this interaction with the masses the photograph reveals its "truth content", a truth that becomes part of a collective "truth". This relates both to the production of a common culture and a way of thinking and perceiving the world that Sontag explored, but it also introduces the capacity of the photographic image to influence, an authority that grants it durability and permanence and enables it to represent historical experience, aspects similar to those Benjamin expects from what he considers to be works of art.[40]

Besides the social, political, and cultural questioning it affords through its depictive potential, photography manages to question its own identity first and foremost. Through the many forms photography has taken over the years, at a certain moment in time it gained a more specific direction that allowed it to receive distinct recognition as a practice. This is a moment that coincided with several changes that were also taking place in architecture, as will be described later, rooted in the emerging predominance and ubiquitousness of the visual in both practices. This moment counts as a significant shift in the history of photography, to be perceived not only as an independent art form but also as a distinct discipline. Formally introduced by Michael Fried in *Why Photography Matters as Never Before* (2008) in which, through various descriptions of works, references and juxtapositions, a couple of points emerge in conjunction to present the element that led to this pivotal moment in the history of photography. At this particular moment the photograph shifted from a more generic journalistic identity to a more expressionistic form of image creation. For Fried, this came about with photography's adoption of the *tableau*[41] from painting, the use of large-scale prints that were

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[39] Walter Benjamin et al., *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media* (London: The Belknap Press of Harvard University Press, 2008), 29.
[40] Dana Arnold, *Rethinking Architectural Historiography* (London: Routledge, 2008), 216.
[41] French critic Jean-François Chevrier initially coined the term in 1989 for the catalogues of the exhibitions "Une autre objectivité" and "Foto-Kunst". See: Olivier Lugon, "Before the Tableau Form: Large Photographic Formats in the Exhibition Signs of Life, 1976." *Études Photographiques*, 25 (2010). http://journals.openedition.org/etudesphotographiques/3440.

exhibited on the wall, a far cry from Benjamin's small photographs that fit into albums and were most often used as memorabilia. Using the term "tableau" coined in 1989 by French critic Jean-François Chevrier to argue for photography's inclusion in the visual arts,[42] Fried reintroduces the notion that through photography's change in scale there was also a change in the "viewer['s] standing before it"[43] and because of this, he considers the photograph not only for its representational ability but also for its "*objecthood*". Chevrier saw that the experience of the viewer was different in front of a tableau to that which previous photographic prints had evoked, a situation that necessitated the exhibition of the subject and strengthened the links between photography and painting as works of art. Fried bases his argument on this and takes it a step further by looking at a specific type of photography through the lens of his distinct critical stance on Minimal art, as he earlier expressed in "Art and Objecthood" (1967) and which continues in a renewed way in this later publication.

The arguments Fried makes on this particular subject aside, his argument brings together certain ideas and events that indeed signify a particular change taking place in the practice of photography. His approach takes into consideration postmodern scepticism and how the photograph is perceived both as an object unto itself and as a representation of something other. He debates the role of photography in regard to history, realism and credibility and its varying reception by the public that has been analysed by theorists, referencing Jacques Rancière and Roland Barthes. Instead of questioning photography's right to be considered art, he delves directly into the reasons why it is indeed considered art. In this he presents a variety of ways in which photography has become part of the artistic discourse, mentioning the work of artists such as Jeff Wall, Thomas Demand, Candida Hofer and Thomas Ruff, whose work coincidentally formally follows the "tableau" mode, engendering publicity and grandiosity.

Fried distinguishes three beginnings for this shift, all of which coincide with the period in which these artists were working. He acknowledges the founding of the Düsseldorf School of Photography, the leading movement to use the new large-scale format and minimalistic approach, [44] with Bernd and Hilla Becher as its pioneers, as an important and distinct event in this timeline. As a result, he sees the year the School was established as defining the historic moment of this photographic shift. At the same time, citing works by Cindy Sherman, Jeff Wall and Hiroshi Sugimoto, Fried sees photography as benefiting from its association with the cinema. These artists engage with the subject of cinema in very different approaches – the absorption in the cinematic

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[42] Jean-François Chevrier, "The Adventures of the Picture Form in the History of Photography (1989)" trans. Michael Gilson, in *The Last Picture Show: Artist Using Photography, 1960-1982*, [Exh. Cat.], curated by Douglas Fogle (Minneapolis, MN; Los Angeles, CA: Walker Art Center, 2003-4), 116.

[43] Michael Fried, *Why Photography Matters as Art as Never Before* (London; New Haven, CT: Yale University Press, 2008), 2.

[44] The large-format *tableau* is now considered a signature identity of the Düsseldorf School of Photography. Stefan Gronert, The Düsseldorf School of Photography (New York, N.Y.: Aperture: D.A.P./Distributed Art Publishers, 2009), 7.

narrative, the audience's engagement in a faraway, shiny spectacle and the captivating screens of cinemas – through still photography. More enquiries are undertaken here into the use of photography to explore the role of the audience and the role of the photographic image and continued further in Fried's third point, the subject of beholding. Analysing texts such as *Adelaide, ou la Femme Morte d'Amour* (1755), Yukio Mishima's *The Temple of Dawn* (1970), and Susan Sontag's *Regarding the Pain of Others* (2003), Fried problematises the concepts of "falseness" in representation, the changing identity of the subject when the viewer acts as a voyeur, and the ethics of aestheticising pain, where the photograph addresses the viewer as a critical reflection.

Throughout his work Fried is seen to be enlisting a variety of methodologies, examples, and references to support his argument for why photography matters (as art) as never before. He portrays the photograph as an object that possesses aesthetic and philosophical qualities, as a natural development of contemporary art with an antitheatrical presence. His reasoning often refers back to "Art and Objecthood*"* (1967), an inaugural text by Fried in which art undergoes a sceptical investigation, reaffirming both his past statements and new reasonings by comparing art to art and to the depiction of art in philosophical and theoretical readings. This position on the disciplinary acknowledgment of photography not only presents an entirely different consideration of the role of photography in other disciplines; it also locates it as a substantial critical medium. In addition, Fried places significant emphasis on the fact that this photographic shift coincided with a similar shift in the arts resulting from the "eclipse of high modernism and the triumph of postmodernism both artistically and theoretically in the 1970s and '80s".[45] This culminates in what might be interpreted as a redefinition of photography, not as a practice with artistic potential but as a new form of art with an academic standing and therefore transforming a previously amateur practice into a distinguished discipline.

Image vs viewer

Fried's definition of photography as art is fundamental in the framing of this research, both for its methodological approach of looking through photography as a critical lens and for its chronological framing. However, the elementary aspects of its situation, its reception and perception have been expounded further in writings of other theorists, some of whom are mentioned in Fried's book and others who are not.[46] Despite the fact that Fried often refers to the beholder and the photographic

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[45] Ibid, 2.

[46] Fried bases many of his analyses on writings by Heidegger, Wittgenstein, and Hegel, as well as those of Chevrier, Barthes, Brassaï, Proust, and Susan Sontag, yet other writers of equal importance to the discussion of the role of photography and its artistic identity, such as Benjamin, Rancière, and Berger, are not mentioned in his book.

image, the development of these concepts is discussed more analytically in the work of John Berger, who critically addresses the relationship between photograph and viewer from a wider perspective. Berger's ideas on "ways of seeing" are inseparable from this notion of the viewer's gaze, as expressed in his publication and television series *Ways of Seeing* (1972).[47] He presented the social, cultural, political, and most importantly, experiential relationship between image and viewer in the 1970s, revolutionising the way we perceive art. His interests encompassed a wide spectrum of the arts and social sciences and won him international acclaim, with numerous scholars citing his work. In his writing he communicates a rare view of the world, balancing a rich philosophical background and a transparent presentation that is accessible to all.

In *Ways of Seeing*, Berger delves into the sense of vision and its prominence in, and influence on, our perceptions and various visual mediums, whether these are paintings, photographs, or advertising images, the latter being a particular investigation in the relationship of human psychology and the visual medium that specifically reflects modern developments of the last century. In his work Berger suggests, both literally and figuratively, that gazing upon something is a process that situates the viewer in relation to the subject. He begins to analyse this by stating that "the way we see things is affected by what we know or what we believe", turning the action of seeing from a mechanical process of looking at something to a conscious action of seeing that incorporates the viewer's awareness. Berger continues by saying that all images are human-made – including photographs – which leads to the conclusion that the image is a medium of communication between the creator of the image and the spectator, a concept that is strengthened through the narration on the background of Frans Hals' portraits of the Regents and Regentesses and even more so through his analysis of the representation of the female body and the different messages it carries depending on its ways of depiction. What is really communicated in these narrations, and has immediate application to Fried's main argument for the importance of photography as art, is the practice of seeing: that is, the invested and active participation of the observer, an intellectual interaction with the subject, where the subject is, moreover, the product of another conceptual practice.

In *Understanding a Photograph* (2013), a collection of Berger's critical writings on photography, one can understand the multiple layers that constitute this type of image. In contrast to Fried, Berger does not place as significant a value on the recognition of photography as art, but not in relation to its artistic value, rather because he believes that doing so might constrain photography by the strict rules of composition that characterise painting. Berger considers photography to have its own trajectory, unburdened by the reverence that seems to accompany works of art, accessible to many and with still plenty of potential to further develop. For, as he states, paintings and sculptures have acquired the status and value of property, whereas photography, a replicable image, is not considered as such. This is a fundamental element of photography that not only sets it apart from

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[47] John Berger, *Ways of Seeing* (London: Penguin Classics, 1972).

other visual arts but also allows it to be experienced and considered in very particular ways, unlike, for example, a painting. It has been a main argument for advocates against photography as art, as noted by Walter Benjamin, Michael Fried and John Berger, amongst many others, but it has also been an important argument for altering the consideration of art as an object and as property. Berger's analyses, therefore, always focus on the content of the image, frequently making comparisons between the compositions of the photograph he is analysing and those of paintings, placing the viewer in a wider context of historical precedents and locating the photograph in a socio-political context for critical assessment. For Berger, a photograph can be read in so many ways, among which it can be a symbol of cultural hegemony, a medium for depoliticising war images, or a window on the apparently unseen. It is through his unique analytical methods that Berger poses difficult ideas for consideration that otherwise go unnoticed in our appreciation of the artistic bearing of the photograph.

Berger eventually challenges our position towards the visual by distinguishing "looking" from "seeing" and, moreover, showing that there is more than one way of seeing. In *Ways of Seeing,* Berger positions the observer as the one who generates meaning, instead of the work of art that is seen and accomplishes it through a process of questioning. He enlists philosophy and science, differentiating between optics and perspective, and teaches the viewer how to "read" an image. However, Berger does not limit this challenge to the personal context, instead expanding the viewer's comprehension of the socio-economic influence in the structure of the world and therefore its influence on the visual fabric that the viewer encounters. It is in this particular work by Berger that the role of art as a social currency becomes most clear, yet it barely detracts from the graceful way with which he places the viewer in the world and in relation to the seen. On the contrary, it places art and everything that is "seen" on the same spectrum, to be critically reviewed and analysed in the same way. He discusses *The Regents of the Old Men's Alms House* by Hals and a number of different advertisements, all with the same intensity and attention to context and composition, thus ascribing the same value to all the visual mediums, regardless of their artistic standing or how easy they are to produce.

Amongst the words "gaze", "view", "see" and "observe", the latter is perhaps the most accurate on this occasion. The act of observing, as understood from Berger's analysis, is dependent on the observer and is consequently subjective. The art historian Jonathan Crary brings up two more words in relation to observing, spectating, and perceiving. In *Techniques of the Observer* (1990) he states that the act of seeing is a mechanical action, at times outside of the control of the individual, which he links to the definition of spectating. In *The Emancipated Spectator* (2008),[48] the philosopher Jacques Rancière questions the notion of spectating as a passive state, both physically and mentally, and turns to the subject – which in his case is the theatre – to attempt to awaken the spectator and transform them into an active participant. The focus on the subject as a means to guide the spectator goes back to a critical review of the modern world, its cultural homogenisation and the increasing

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[48] Jacques Rancière, *The Emancipated Spectator* (London: Verso, 2014).

predominance of the visual that resulted in Guy Debord 's "society of the spectacle", described in his 1967 book.[49] Through contemplation the spectator can develop critical thought, the ability to distinguish between reality and fiction and engage with that which they behold, finding freedom of thought beyond the mediation of the visual. For Crary this form of emancipation is understood by the term "observation", an engagement with the subject that functions within "a prescribed set of possibilities, [and the observer is] one who is embedded in a system of conventions and limitations"[50] that resonate with what Berger described as the viewer's knowledge and beliefs. Some of these ideas are founded on Schopenhauer's definition of vision, which was both a scientific and aesthetic view of the subject that, as Crary describes, characterises observation as something that "'occurs within the brain', within the subject", creating another definition of visual subjectivism. There are two elements that emerge through this process of observation that are mentioned by Berger and also expressed in further detail by Chevrier and Crary. One is the situation of the image and the observer that is clearly physical, and somewhat mechanical, allowing the viewing of the former by the latter. It is through this situation, that incorporates visibility, whether this is clarity, scale, or distance, that observation, and subsequently perception, emerges. The second is what incorporates this perception, the process that takes place in the observer's mind and how viewing turns into a form of experience and understanding. For Crary both of these are expressed through the "phenomenon of the observer"; for Berger they constitute elements that define our "ways of seeing".

Most of the works discussed up to this point belong to the same period, the twentieth century; in fact, they can be divided into two groups covering the first and second half of the century. The earlier group consists of principal enquiries into the fundamental nature of vision and the new technologies of visual reproduction.[51] Crary picks up on these earlier considerations and repositions them in his contemporary understanding of vision. In fact, he ventures further back to the 1818 theories of Schopenhauer, who looked at the modern observer and the camera obscura as a mechanism for developing his ideas; he analysed the function of the eye, seeing, or even observing, as Crary suggests, turning to the photographic camera as a means of study.[52] Crary identifies then that the observer emerges when the visual field begins to shift, in this case following the Industrial Revolution, as the world entered a rapidly accelerating alteration,[53] one that coincided with the appearance of photography and with it an increase in the production of images. As the environment

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[49] Guy Debord, *Society of the Spectacle* (London: Verso, 1990).

[50] Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in Nineteenth Century* (Cambridge, MA: MIT Press, 1990), 6.

[51] This includes Benjamin, who was discussed previously, as well as Wittgenstein and their other philosopher contemporaries discussing photography and image.

[52] Crary bases many of his descriptions on Schopenhauer's theories; in Arthur Schopenhauer, *The World as Will and Representation Vol. 2*. [1818], trans. E.F.J. Payne (New York, NY: Dover Publications, Inc., 1966).

[53] This alteration relates to technological advancements, but equally to the societal, cultural, scientific, and artistic changes that followed due to new technologies, changing both the built environment and the impression of the world at the time.

and its representation changes, so the perception of the viewer changes alongside it. Thus, the second group centres further on this new shifting visual environment and the modern type of observer that emerged.[54] With this rapid development the research and debate on the subjects of the visual medium and the viewer's position in relation to them created a wealth of material in a very short time, as more questions arise with each different type of visualisation that emerges and their more embedded applications in society.

In a more photographic context these two periods emphasise what John Tagg points out in discussing the identity of the photograph, that in order to analyse photography it has to be done within the limits of the social, political and cultural context of the specific timeframe within which it is practised.[55] This seems true, not only in the case of the subjects that are represented through photography which are not able to be completely comprehended when taken outside of their context, but also for photography itself and its technological development and capacity that changes continuously through time, as does its reception by the photographer and the observer. For this reason, the analysis of texts and practices that have had a role in the shift in photography and architecture, as mentioned previously, need to be focused on a similar timeframe within which these shifts began to emerge and within the Western ocularcentrism that defined the reception and dissemination of these works within the photographic and architectural spheres.

Emancipation of photography as art

The introduction of the emancipation of photography adds additional layers of analysis to the discussion of the mechanics of vision and the role of the photograph. Analysing the photograph as a work of art also takes into account its current cultural status and visual prevalence. It becomes part of art history, and as Levin discovers in Benjamin's *Rigorous Study of Art* (1933),[56] "art history – understood in a broad sense as the critical, symptomatological deciphering of cultural production"[57] in turn allows the photograph to become a medium of such critique and analysis. The role of the photographer turned artist in this case becomes deeply critical and expressive, while the photograph is then read in light of its contemporary milieu. At the same time, as seen earlier in the writing of Sontag and Sekula, the photograph is part of the way culture and society is interpreted, as it simultaneously

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[54] This includes all the authors mentioned earlier whose works cover the 1960s and 1980s.

[55] John Tagg, *The Burden of Representation: Essays on Photographies and Histories* (London: Macmillan Education UK, 1988), 187-189.

[56] Walter Benjamin, and Thomas Y Levin, "Rigorous Study of Art," *October* 47 (May 13, 1988): 84–90. https://doi.org/10.2307/778983.

[57] Thomas Y Levin, "Walter Benjamin and the Theory of Art History," *October* 47 (May 13, 1988): 77–78. https://doi.org/10.2307/778982.

affects their development. Subsequently, what would have once been considered an artefact, a documentation of a subject, through this emancipation may now be regarded as part of an intellectual discourse.

Indeed, Fried's title suggests that the consideration of photography as art is beyond question, the concern now being about *why,* rather than *whether,* it is important as an art form. At the same time, though, there is a specific distinction applied to the photographic material he considers. The selection of large-scale photographic prints that are exhibited on the wall – including the work of Thomas Demand, that is more of a combination of photography and sculpture – focuses the debate on photography that closely resembles painting in the way it is presented. While not excluding other forms or scales of photography that can be also considered art, this particular type of photography as an art object demonstrates on the part of the photographer a certain consideration of space and visual perspective that overlaps with architectural considerations of spatial composition. It enables the photograph to be seen not only for its captured content but as an element that is positioned in space. This might inhibit the discussion of photography unless it is recognised that the nature of photography and the photograph is multiple. The photograph can be considered to have a different medium of authority depending on whether it is seen as an art object as a cultural or social element or as a method of investigation.

In terms of considering photography as an art object in the context of emancipated photography, this allows it to both support its newfound status and to focus the discussion within the parameters of photographic discourse. This enables natural conjectures that relate to painting, for example, to be discussed within a photographic framework. As an object, photography develops a dynamic relationship between the photograph and the observer. In *Art and Visual Perception* (1954)[58] Rudolf Arnheim analyses the various categories within which this relationship may affect the perceptions and the result of encountering this art object, the photograph. Elements such as balance, shape, form, light, colour, and expression are some of the areas that Arnheim explores using a scientific approach not too dissimilar to Schopenhauer's analysis of vision. These elements may reflect the level of the content of the photograph as well as the photograph as an object and its positioning in space. With the large-scale tableau form the effects of these elements become magnified, and this is partly why Fried puts so much emphasis on the works and the period he is investigating. This perception requires the focus of the observer and, as can be understood from Arnheim's book, is an amalgamation of physical and psychological reactions that becomes more complex the more layered the subject is that is viewed.

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[58] Rudolf Arnheim, *Art and Visual Perception: A Psychology of the Creative Eye* (Berkeley, CA: University of California Press, 1964).

The perception generated by the art object is also noted to have a "force".[59] The medium of photography becomes acknowledged and affects the observer through the experience of seeing. This experience brings about again what Berger mentioned as the "seduction" of the image.[60] It is intrinsically linked to the period and the socio-political and cultural context within which it is viewed, and as such the photograph engenders a form of response to this context. The force of this image shares the authority of the visual media, and when the photograph is no longer an art object it can still retain part of its authority through its reference to the original. In this case the photograph functions as a critique, an evaluation, a commentary or an analysis, and it is within this that photography serves an artistic purpose. The use of photography in Conceptual and contemporary art in the 1960s and '70s established this fact and was one of the driving forces of the development of specific forms of expression in art photography, as will be seen in later chapters. It is the photograph's ability to relate to the factual, the timely and the specific that gives it the capacity to be used as a means of such critique and analysis, and it can become a method of investigation. In conjunction with the two characteristics of emancipated photography discussed earlier, the method of investigation is the one that is the most closely linked to the use of photography in architecture. Within architecture and the broader analysis of space and the human relationship with it, the emancipation of photography enables a more layered and nuanced analysis of these subjects. Following Arnheim's "visual thinking" analysis of the visual perception of art, these areas which he explored take on an architectural methodology of investigation within the visual and perceptive spectrum of photography.

Photography and architecture: the links

As early as the 1800s, architecture considered architectural photography an opportunity. In fact, an article in *The Architect* stated: "The invaluable aid of photography enables the English student to glance, at the same time, at the expressions of the structural ability of different countries and different ages": it continued by praising photography for offering the same experience as visiting the actual site, if not better. For "the camera [can represent the buildings] with a fidelity and minuteness that render a good photograph even more valuable than the memory of the actual visit".[61] Despite such an open reception to photography, it is soon understood that what Eisenman stated on the architecture's position on vision has its roots in the very early incorporation of photography into architecture.[62] As a visual medium like many others, photography can be used without critical thought or for negative

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[59] Rudolf Arnheim. *Art and Visual Perception,* 17.

[60] Berger, *Ways of Seeing*, 14.

[61] "The Temples of Athens and the Churches of Magdala," *The Architect: A Weekly Illustrated Journal of Art, Civil Engineering, and Building*, 1 (1869): 48.

[62] This will be explored further in the following chapter.

purposes, causing more harm in the development of the architectural discipline than good. Kenneth Frampton wrote his *Towards a Critical Regionalism* (1982)[63] precisely as a response to the failings of architecture that followed a heavy reliance on visual approaches versus a more tactile approach – which he argues can surpass the visual and can offer a more critical perception. His position presents not only the shortcomings of such a single-minded visual reproduction of architecture, but also the broader repercussions of the culture it inspires on the image of architecture as a whole (either through its form or representation). However, emancipated photography enters here to offer this critical seeing, for when photography is discussed within artistic parameters the notion of truth and reality versus fiction take on a different meaning. The photograph, in this case, is not an object of simple documentation or a superficial representation: instead, it uses photography's assumptions about these ideas as a means to question and provoke.

Taking into consideration the recent evolution of the role of photography in society, which in turn acts as architecture's source of influence, there is a distinct relationship forming between architecture and photography that can only be recognised in retrospect. Photography's role in architecture has been multifaceted, presenting a means for the proliferation of architectural material, methods of documentation, dissemination, promotion, and a means to achieving many other purposes. It has assisted in progressing the visual aspect of architecture, the fundamental process of conceiving and producing architecture through the production of images, to another level of "image-thinking".[64] Despite various opinions on the subject, ranging from the superficiality of visual architecture to viewing the great potential in the architectural image, the role of photography in the recent past has nonetheless allowed for a more engaged form of "dialectical image". For Benjamin "image is dialectics at a standstill". He mentions in *The Arcades Project* that "Only dialectical images are genuinely historical – that is, not archaic – images. The image that is read – which is to say, the image in the now of its recognizability – bears to the highest degree the imprint of the perilous critical moment on which all reading is founded."[65] Comparing it to a dream, the historian who is tasked with analysing that image then becomes the interpreter of that dream. Accordingly, it could be construed that the architect, theorist, or historian is tasked with critically analysing architecture not through a photograph, but through the architecture depicted in the photograph itself. Through this type of photography, architecture gains the opportunity to be critiqued and analysed within the constraints of "what is seen" and without the additional involvement of the renderer's interjection. It allows for a certain range of objectivity that other visual mediums cannot achieve. At the same time, however,

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[63]Kenneth Frampton, "Towards a Critical Regionalism: Six Points for an Architecture of Resistance." In *The Anti-Aesthetic: Essays on Postmodern Culture*, ed. Hal Foster (Port Townsend: Washington: Bay Press, 1983), 16–30.

[64]Henry Habberley Price, *Thinking and Experience* (Cambridge, MA: Harvard Univrsity Press, 2014), 257.

[65]Walter Benjamin, *The Arcades Project*, ed. Howard Eiland (Cambridge, MA: The Belknap Press of Harvard University Press, 2003), 462.

photography as an emancipated art form brings into this architectural discourse a visual and spatial analysis that complements largely underdeveloped visual perception of architecture. This is a visual analysis which is often referred to here as a "way of seeing" that is: the photographer's "artistic licence" in expressing through the practice of photography certain architectural and spatial concepts.

Photography as analytical methodology

Considering how the architectural students of the 1800s responded to the photography of architecture and Eisenman's critique of the visual thinking of architecture it seems there is a long way to go in the relationship between the visual and architecture. One thing is certain, however, that vision, architecture, and its image are all inseparable. In fact, the perception of architecture can be broken down into the different senses, including Frampton's case for tactility, and as such the photography of architecture is another medium by which to experience, understand and analyse architecture. So, reviewing Eisenman's words on architecture's narrow concept of vision through this lens of emancipated photography suggests a renewed spatial investigation taking place on a photographic plane. It is what Edward Whittaker discusses in his paper *Photography and the Subject of Architecture* (2012),[66] presenting what has already been acknowledged since the earliest photographs, that architecture has been the primary subject and a leading element in photography's history. In fact, Whittaker concludes by interpreting Benjamin's position on photography's "phantasmagoria" – perhaps an earlier version of the issues of spectacle in capitalist society that Guy Debord expands upon in *Society of the Spectacle* (1967) – where the photograph "affects new models of consciousness", gaining a reaction from the observer that affects his perception of space. As a medium, then, the photograph has the capacity to revise established notions of both space and time and in turn "compute them back into a practice of space". When the observer is the architect this interdisciplinary venture into the spatial explorations and interpretations of photography would naturally result in the production of architecture that stems from these photographic revelations. These are the connections which this thesis attempts to decipher and thus present both a clarification of what these spatial investigations in recent artistic photography have been endeavouring to do, and how their interpretation, adoption or adaptation can be seen in architecture.

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[66] Edward Whittaker, "Photography and the Subject of Architecture," in *Camera Constructs*: *Photography, Architecture and the Modern City,* ed. Andrew Higgott and Timothy Wray (London: Routledge, 2012), 125–34.

From Photography and Architecture
to Photography in Architecture

"*Thanks to photography, the eye grew accustomed to anticipate what it should see, and to see it; and it learned not to see non-existent things which, hitherto, it had seen so clearly.*"[1]

The invention of the camera and the appearance of the photograph in the early 1800s began what may be considered fundamental conditioning that has transformed society and our understanding of our world. In the two hundred years since its invention, photography has come to mean a great deal more than the practice of capturing images with the use of a camera and has acquired connotations that reflect social symbolism, artistic interpretation, and a challenge to spatial and philosophic perceptions. Its role alongside and within other disciplines and practices, as well as within significant historical moments, has made photography a somewhat awkward subject for discussion, for its use as a medium in producing variable results that are subject to a number of other effects repositions the discussion of photography to that of the effects that define it. Because of this, it is impossible to discuss photography outside of a certain context. The undisputed relationship between photography and the built environment has been so since the first documented photograph[2] and it becomes the background to what will be explored henceforth, the relationship between photography and architecture within what is known as the modern world. Photography will be presented here as a concept[3] that has gradually developed and altered conditions, moving people and circumstances. As it has struggled over time to be defined, it has changed roles and interpretations, and along with this has altered the relationship it has with the built environment, growing from a medium by which architecture may be seen and documented to become a now inseparable part of architectural thought.

  If Nicéphore Niépce's *View from the Window at Le Gras* (1827) (Fig. 107) signifies the birth of photography, then the genesis of photography as part of architecture seems to have happened quite early on. The developments that will be mentioned here will demonstrate a rapidity that pertains to many events that have taken place in the last two hundred years. This acceleration is a testament to the modernisation of the world, to technological advancements, but to a large degree it is also due in part to the sudden appearance of photography. The end of the eighteenth century was defined by a heightened demand for images that coincided with the rise of the bourgeoisie and the social

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[1] Paul Valéry. *Collected Works of Paul Valery, Volume 11: Occasions*, ed. Roger Shattuck and Frederick Brown (Princeton, N.J.: Princeton University Press, 1970), 158.

[2] Nicéphore Niépce. *View from the Window at Le Gras*, 1827.

[3] Mary Warner Marien has conducted a similar study of photographic history within the humanities by considering photography as an idea. Mary Warner Marien. *Photography and Its Critics: A Cultural History, 1839-1900* (Cambridge: Cambridge University Press, 1997).

importance of the portrait.[4] The invention of photography, however, did not simply respond to this demand but instead set it ablaze by introducing a new means of capturing and producing images. Even though Niépce took the first photograph, it was his partner Louis Daguerre who in part assisted in making photography the universal practice it is today. In 1839 the French government bought the rights to the daguerreotype and made it public, allowing the practice of photography to become free and accessible to all.[5] With its beginnings in France, photography began to spread across the world, becoming a more and more common practice. Photography is thus considered unique in this way, as the suddenness of its invention and spread has been unprecedented. Not only did it reach the furthest parts of the world, it also penetrated all strata of society. From its beginning, photography demonstrated its breadth of assimilation in all its facets. This was expressed early on through the work of Charles Marville, who by the end of the 1850s had already earned a reputation as a photographer. Documenting the city of Paris in his photographs, Marville became instrumental in preserving the history of Paris as it underwent Napoleon III's radical modernisation, designed by the urban planner Georges-Eugène Haussmann.[6] Charles Marville's work represents an early relationship between humans, architecture, and photography, distinguished by its engaging way of seeing that make his work important not only for its documentary and archival role but also as an exploration of this young artistic medium.

Early incorporations of photography in architecture: Henri Labrouste's Bibliothèque Sainte-Geneviève

While photography is seen to follow what is considered its natural trajectory as a means of documenting the urban landscape, and was growing as an as yet unknown and unrecognised form of art,[7] it has recently come to light that at the same time architects had recognised its potential and were already employing it in their work. Due to the ability of photography to accurately record, that was fascinating at the time, it was used by architects in restoration projects and for reference, as evidenced

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[4] The commissioning of a portrait, a privilege confined to the upper classes who could afford the services of an artist, became more widely available through the practice of photography and the broader accessibility it offered as the camera developed towards the end of the 1800s onwards. As its practice spread, it transformed from a privilege to a social practice of identification, which John Tagg defines as a "democracy of the image". John Tagg, "A Democracy of the Image: Photographic Portraiture and Commodity Production", in *The Burden of Representation: Essays on Photographies and Histories* (London: Macmillan Education UK, 1988), 34-59.

[5] David Bate, *Photography: The Key Concepts* (London: Bloomsboory Academic, 2016), 149.

[6] Sarah Kennel, National Gallery of Art (Förenta staterna), Metropolitan Museum of Art., National Gallery of Canada (Ottawa), *Charles Marville: Photographer of Paris (*Washington, D, C.; Chicago: National Gallery of Art; University of Chicago Press, 2013).

[7] Charles Marville fell into relative obscurity after his death, regaining increased acknowledgment with the bicentennial commemorative exhibition organised by the National Gallery of Art, Washington, in association with The Metropolitan Museum of Art, New York in 2014.

by Charles Marville's architectural documentations. However, Neil Levine's 2012 article "The Template of Photography in Nineteenth-Century Architectural Representation" reveals that photography had also become part of architectural practice at this time, in a rather unconventional manner. The case in point is the creation of the nineteenth-century perspective drawings of the Bibliothèque Sainte-Geneviève in Paris by the architect Pierre-François-Henri Labrouste. Levine describes how Labrouste commissioned[8] the photographers Bisson Frères to photograph his recently completed building in order to use the photograph (Fig. 5) as a basis for his own hand-drawn renderings of the Bibliothèque (Fig. 4).[9] The photograph, taken in 1852, is a perspectival view of the Néo-Grec building as it sits between other Neoclassical buildings at the corner of Place du Panthéon and rue Valette, across from the Place du Panthéon, which is at the left and outside the frame of the photograph.[10] It represents one of the first documented architectural commissions and also remains one of the first known commissioned photographs to be used as a template for an architectural drawing in a publication.[11]

Labrouste, an architect whose talent in producing hand-rendered architectural drawings is evidenced in earlier works,[12] clearly undertook what was a rather unusual practice at the time, a commission from an architect to photograph contemporary architecture and in turn create a rendering based on the image in the photograph instead of an in-person, witnessed view. This practice is attributed in part to his École des Beaux-Arts background[13] and the initial fascination with this new technique that could capture instantly and "accurately" the image of a building.[14] At the same time it

[8] Levine mentions that during the commission, Labrouste was deeply involved in the setting-up of the photograph, instructing the photographers on the positioning and framing of the scene.

[9] Labrouste's drawing was then used as a basis for the engraving by Jacques-Joseph Huguenet, both of whose names appear in the second version that was published (see following image). In Neil Levine, "The Template of Photography in Nineteenth-Century Architectural Representation," *Journal of the Society of Architectural Historians* 71, no. 3 (2012): 306–31, https://jsah.ucpress.edu/content/ucpjsah/71/3/306.full.pdf

[10] Paul Dufournet, Claudine de Vaulchier, and Gilbert Dumas, "1750–1900: Dessins, Photographes, Jetons et Médailles, Effigies d'Architectes," *Académie d'Architecture, Catalogue Des Collections* 1 (1988): 258–59

[11] The publication was the following: César Daly, "Bibliothèque Sainte-Geneviève," *Revue Générale de l'Architecture et des Travaux Publics* 11, no. 11 (1853): 392–93

[12] Labrouste's drawings hold particular significance in the history of drawing as architectural survey and equally in architectural presentation in drawings on account of their painstaking detailing and aesthetic representation. His drawings earned him the distinction of being one of the youngest architects to win the Grand Prix for his *Cour de cassation* (1824) which in its turn developed his drawing practice and style through collaborations with engravers and painters. Although not all of his later works are by Labrouste himself, his influence still resonates through the architecture and the manner of its depiction. In Henri Labrouste et al., *Henri Labrouste: Structure Brought to Light* (New York: Museum of Modern Art, 2012).

[13] In his paper, Levine mentions the Beaux-Arts' gradual move towards perspective drawing, the ban being lifted shortly after Labrouste's enrolment. In an 1846 lecture, perspective was considered akin to an illusion that "contradicted reality", an opinion that was common at the time, and thus this manner of depiction was generally avoided, with the exception of Labrouste, who would often employ it.

[14] The Bibliothèque was one of the first of Labrouste's projects, and it was also the first building in Paris to be constructed specifically as a library, making it a landmark project for the architect's portfolio. Yves Peyré, *La Bibliothèque Sainte-Geneviève À Travers Les Siècles* (Paris: Gallimard, 2011), 58.

represents the widely held conception at the time that photography produces an objective representation of reality:[15] this view was also fostered by the recent undertaking of the Missions Héliographiques[16] demonstrating the contribution of photography to historical preservation, further supporting the position of the architectural community that photography was specifically invented for architecture, as expressed by the editors of the *Encyclopédie d'Architecture* in the same year.[17] Neither the practice nor the photograph have been widely commented upon or referenced outside of Levine's work, a fact that shows either the seamless interchange between photography and architecture or the lack of consideration of the role of photography in such architectural developments.

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[15] Art critic and curator Henri Delaborde writes: "Compared to art, photography […] can only produce, instead of an image of truth, the brutal effigy of reality. In its principle and in its necessary conditions, it is the negation of feeling, of the ideal." "That," he explained, "is what gives it its negative expression, the inert appearance of its products." The "extreme abnegation of photography," he added, "its impotence to modify reality," was, however, entirely appropriate to its documentary function in the "representation of monuments [. . .] that are of interest to archaeology and history." Quoted in Neil Levine, "The Template of Photography in Nineteenth-Century Architectural Representation,", from Henri Delaborde, "La Photographie et la gravure," *Revue des deux-mondes*, 26th yr., 2nd per., 2, no. 4 (1 April 1856), 617, 622, 628–29.

[16] The Missions Héliographiques was a series of photographic surveys to preserve the French architectural patrimony. It was started in 1851 by the Société Héliographique. Five photographers were selected to travel around France and photograph monuments and architectural spaces of historical and cultural significance. In Anne de Mondenard, *La Mission Héliographique: Cinq Photographes Parcourent La France En 1851* (Paris: Editions du Patrimoine, 2002).

[17] Maxime Du Camp, *Egypte, Nubie, Palestine et Syrie: Dessins Photographiques Recueillis Pendant Les Années 1849, 1850 et 1851, et Accompagnés d'un Texte Explicatif Par Maxime Du Camp Chargé d'une Mission Archéologique En Orient Par Le Ministère de l'Instruction Publique*, Encyclopédie d'architecture (Paris: Gide et J. Baudry, 1852), 62.
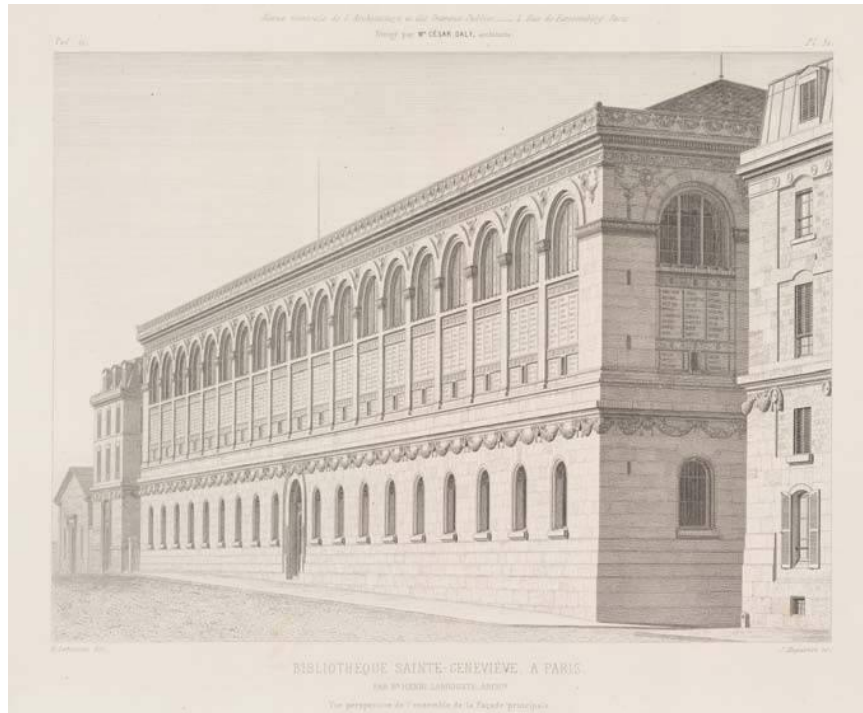
Figure 4. Henri Labrouste, perspective drawing of the Bibliothèque Sainte- Geneviève. Engraving by Jacques-Joseph Huguenet, 1853, (from Revue générale de l'architecture et des travaux publics 11, no. 11 [1853], pl. 31).

Figure 5. Bisson Frères, photograph of Henri Labrouste, Bibliothèque Sainte-Geneviève, Paris, 1852, approx. 21 x 33.5 cm without mount. Salted paper print probably coated with albumen, on mount, (Académie d'Architecture, Paris)[18]

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[18] Levine notes that the dimensions between the photograph print and the engraving are almost identical. The dimensions within the crop marks were 18.70 cm high by 16.30 cm wide for the photograph and 19.40 cm high by 25.70 cm wide for the engraving, with slight irregularities due to post-production shrinkage of the paper, (observation by Henri Zerner).

The photograph of the Bibliothèque was not published until many years later, while the traced rendering appeared,[19] according to Levine, the following year in the leading French architectural journal *Revue Générale de l'Architecture et des Travaux Publics* and was exhibited in the 1855 Exposition universelle (Commission impériale).[20] The publication of architectural perspective drawings was also an unusual practice that was gradually becoming more common in British and German publications of the 1830s and 1840s.[21] Plans and elevations were considered much closer to depicting the "truth" of a building than a distorted perspectival view.[22] In fact, as can be seen in many of Labrouste's drawings and those of some of his contemporaries, certain elevation and detail drawings are shaded and coloured in such detail that they almost resemble photographs (even a few exterior perspectives use shading to this degree, although it appears that for the most part it is reserved for more sculptural representations of monuments[23]). The photographic techniques at this time did not allow such clarity and detail and in this case the drawings can be seen as a better choice to represent the architecture of the space. Despite this, Labrouste is seen to have taken some editing initiatives in his drawing.[24] First of all, the drawing is a cropped version of the initial photograph. The only buildings included, besides the Bibliothèque itself, are the Bibliothèque's administration building on the right (which is largely cropped out of the drawing) and the Collège Sainte-Barbe in the distance, designed collaboratively by Henri and his brother, Théodore Labrouste. The angle of the perspective view places the Bibliothèque amidst these two neo-classical buildings, drawing attention to its distinctive contemporary Néo-Grec style. In his drawing Labrouste omits the building seen at the end of the photograph, an eighteenth-century repurposed church designed by Soufflot, which casts a dark shadow on the Bibliothèque. The omission of this, and of some other buildings in the distance, allows the building to become more prominent, with few distractions, and positions it as part of a larger project of urban redevelopment which follows a gradual stylistic progression. Other elements seen in

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[19] It is presumed that the photograph was used as a visual reference for the drawing using technical drawing tools which were common in survey drawings to achieve as close to an exact copy of the original as possible.

[20] Daly, *Bibliothèque Sainte-Geneviève*, 31. And in *Exposition universelle de Paris en 1855 and Musée du Petit Palais (Paris, France), Explication Des Ouvrages de Peinture, Sculpture, Gravure, Lithographie et Architecture Des Artistes Vivants Étrangers et Français, Exposés Au Palais Des Beaux-Arts, Avenue Montaigne, Le 15 Mai 1855 (Paris: Vichon, 1855),* 559.

[21] Levine, "The Template of Photography in Nineteenth-Century Architectural Representation," 315–17.

[22] Plan and elevation were more closely linked to the vertical plane and the exactitude of geometry as expressed in Albrecht Dürer, *Underweysung Der Messung Mit Dem Zirckel Un Richtscheyt in Linien, Ebnen Unnd Gantzen Corporen* (Nördlingen Uhl, 1983). The Professor of Perspective at the École des Beaux-Arts in 1845, Simon-Claude Constant Dufeux lectured on the illusionary quality of the perspective drawing, as seen in footnote 13.

[23] Labrouste's descriptive drawing of the Tomb of Cecilia Metella, Appian Way, Rome, 1826, in pencil and grey wash and Henri and Théodore Labrouste's Pont de la Concorde perspective drawing, c. 1838, are examples that demonstrate the realistic representation attempted through drawing (Fig. 6, 7).

[24] Labrouste's role in producing the drawing is not entirely clear since both his name and that of Jacques-Joseph Huguenet are noted as being the engravers. Levin does point out however that Labrouste had taken credit for as draftsman for this particular engraving and his involvement was more than just intellectual.

the photograph, such as lamp posts, figures and chimneys, bring the building more to the forefront of the viewer's attention, overcoming any distractions that detract from the architect's design. Labrouste also edited parts that conflicted with his original design, such as "the shadow at the lower left edge of the first step of the entrance to make the face of the step appear flush with the stone jamb, which was how the detail had been designed."[25] In other parts, he highlighted features that were not photographed as clearly as the architect would have liked; in the drawing the stonework is clearer, with no discoloration, while the frieze is clearly defined in all its detail, the details of the glass panes become more prominent and the inscriptions under the windows are made more legible. These small edits here and there actually create quite a different image from the photograph.

Figure 6. Henri Labrouste (1801–1875), record drawing of the Tomb of Cecilia Metella, Appian Way, Rome, 1826. Pencil and grey wash, 593 × 680 mm. DMC 1523.

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[25] Levine, 327.

Figure 7. Henri Labrouste and Théodore Labrouste, Pont de la Concorde project, perspective drawing, ca. 1838 (Archives Nationales, Paris).

There is an irony here in using photography to produce a perspective drawing which becomes clearer when the reasons Labrouste chose this method are identified. It was obviously not for the purpose of either ease or speed, since photography was not a simple "point and shoot" practice and architects such as Labrouste and his team were quite skilled in producing perspective renderings very quickly. The undertaking might have been an exploratory exercise in the new photographic practice as part of architectural representation, and according to Levine's research on Labrouste it might have also been an exercise in objectivity.[26] Labrouste appears to have thought that basing his drawing on a photograph would grant the drawing an additional layer of "truthfulness" and objectivity. However, here lies the irony: for Labrouste, despite his initial intentions, tampered with the image, effectively rendering it as much a drawing as it would have been if he were creating the drawing out of his imagination, an idealised version of "reality".

Considering today the editing processes Labrouste performed through his drawing, it could be said that if Labrouste had had access to modern photographic editing technology, the drawing of the Bibliothèque would essentially be a photo-manipulation of the original photograph. The architect was already creating drawings that were "photorealistic" for the period through his shading and colouring of details and elevations; the only difference between those drawings and the perspective was the immediate action of reference that links the photographic practice to drawing.[27] At the same time, it

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[26] This is mentioned in both Levine, "The Template of Photography in Nineteenth-Century Architectural Representation." and Neil Levine, *Modern Architecture: Representation and Reality* (New Haven, CT: Yale University Press, 2010).

[27] The same cannot be said, however, for another architect's work that was similarly affected by photography – Piranesi's engravings, which suffered from dramatic "overexposure", as discussed in Victor Plahte Tschudi, "Piranesi, Failed Photographer". *AA Files*, no. 75 (2017): 150–51.

presents a thought process that would later develop in architecture as an approach to editing photographic images through methods very similar to drawing, essentially placing the photograph in question in relation to its veracity. Following the advancements being made in photographic technology, soon the need to trace photographs in order to edit them would become unnecessary and architects would be able to edit photographs directly, recreating images which sow doubt in the viewer about whether they are original or manufactured, and whether they represent some aspect of reality or the architect's intentions. The introduction of the Bibliothèque to the wider public through the publication of the "edited photograph" shows how the reception of physical spaces through their "realistic" representations has been an essential part of architecture since these early architectural renderings.

The spread of photography

During the establishment of photography of architecture in Paris through the Mission Héliographique, London raced to establish innovation in the field. The Great Exhibition of 1851 glorified the new medium of photography, even suggesting a parallel between the site of the exhibition at the Crystal Palace to that of the photographic studio, which was then referred to as a "glass house".[28] The event hailed photography as the invention of the century, situating the exhibition as a pivotal moment in the history of photography.[29] The exhibition of photographs and the opportunities for the creation of new photographs of the event was an international landmark that captured exactly how fast and far the practice was spreading in such a short time since its invention.

The speed of its development and its ease of access has since meant that photography has struggled to assume its own identity and position, a recurring theme in the history of photography, even up to today. Fluctuating between science and art, between documentation and artifact, it provides a facility for anyone, even with the least aptitude in either technology or art, to create images. Frederick H. Evans is one example: someone who overcame his lack of formal training or experience through commitment and practice. When he picked up a camera in 1883 it was the beginning of his career as a significant artist-photographer who found that the purity and honesty of the photographic medium enabled him to portray beauty in his subjects.[30] From portraits to landscapes and architecture, Evans established his practice amongst the most important of his time. His photographs of medieval

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[28] Elizabeth Heyert, *The Glass-House Years: Victorian Portrait Photography 1839-1870.* (Montclair, NJ: Allanheld & Schram, 1979), 33-56.

[29] Mark Haworth-Booth, Victoria and Albert Museum, and Alfred Stieglitz Center. *The Golden Age of British Photography, 1839-1900: Photographs from the Victoria and Albert Museum.* (New York: Aperture, 1984), 48.

[30] Anne M. Lyden, Hope Kingsley, and J. Paul Getty museum (Los Angeles, Calif.), National Media Museum (Great Britain*), The Photographs of Frederick H. Evans [Exhibition, J. Paul Getty Museum, Los Angeles, Frome February 2 to June 6, 2010, and National Media Museum, Bradford, from September 24, 2010, to February 20, 2011* (Los Angeles, CA: J. Paul Getty Museum, 2010).

cathedrals received particular attention: they explored the space through its composition, architecture and light, and transformed space into beguiling "paintings" of light and shadow. Evans' *Wells Cathedral: A Sea of Steps* is a good example of this approach (Fig. 8). This photographic pictorialism presents the incorporation of photography into the study of space: Evans would spend weeks exploring his sites, taking notes, and practising his photographic shoots with different lenses, at different times of the day and from different angles. The similarities to painting still remain transparent in the presentation of the subjects and the stylistic approaches, yet at the same time there is clearly an emphasis on acknowledging the unique qualities of photography as an art form, particularly its "straightforwardness" and "truthfulness". What began as an amateur's venture into a new and fascinating invention (perhaps even as an alternative creative outlet for someone who was "unable to draw, sketch, or paint"[31]) soon turned into a committed creative practice that turned the science of photography into the art of photography. In 1892, there was a schism in the Photographic Society of Great Britain, and several of its members, including Evans, created a new artistic circle, the Linked Ring, that believed the practice of photography to be fine art. Throughout these tumultuous events in photography the role of architecture remains ever present, increasing in prominence. As the subject in focus, it began to receive more and more attention from individuals from varying backgrounds who began to explore, analyse and eventually critique architecture through the camera.

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[31] Frederick H. Evans, "On Pure Photography". In *Photography: Essays and Images. Illustrated Readings in the History of Photography*, ed. Beaumont Newhall (New York: Museum of Modern Art, 1980), 177–84.

Figure 8. Frederick H. Evans, Wells Cathedral: "A Sea of Steps," Wells Cathedral, 1903, platinum print, 23 x 18.5 cm, (MoMA photography collection archive).

Within this period, architects can be seen to follow at a slower pace as they become interested in photography, responding to an increasing demand: from 1870 onwards the Royal Institute of British Architects (RIBA) added photographs of works executed by their members to their catalogues and collections. Architectural journals gradually begin to follow, and included photographs alongside other illustrations, as seen in the prominent architectural journal *The Builder*: its July-December 1885 issue includes photographs of sculptures, details, and perspective views of buildings.[32] One of these early published photographs represents Austin Hall, at Harvard Law School in Cambridge, Massachusetts, completed in 1884 by the architect H.H. Richardson (Fig. 9). The selection of this building might be simply serendipitous, but as it happened, Richardson had a specific interest in

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[32] Sprague & Co. 'Austin Hall, Harvard Law School, Cambridge, Mass. - H.H. Richardson'. *The Builder,* 49 (1885): 864–70.

photography and had already collected a significant number of photographs of French architecture.[33] His collection was kept at his work studio, and acted as a source of inspiration for, and influence on, his practice, as seen in the Romanesque elements that define Austin Hall. In a similar fashion it is noted that other architects, such as Frank Lloyd Wright and Erich Mendelsohn, made use of photographs as references and as drafting guides for their own drawings.[34] Thus, thirty years after Henri Labrouste's work, photography began to become more and more a part of the architectural process and documentation simultaneously, enhancing the bridging of time and of places that were far apart.
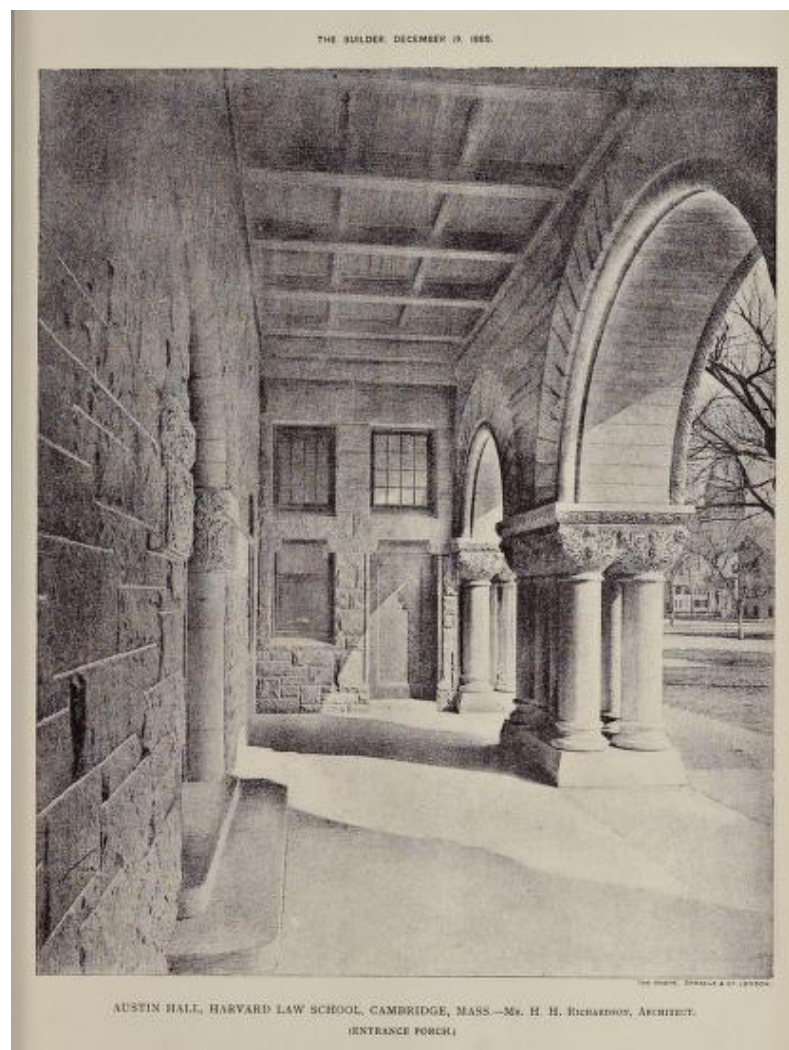
Figure 9. H. H. Richardson, Austin Hall, Harvard Law School, Cambridge, Mass., photograph by Sprague & Co., 1885, (published in The Builder 49 1885, University of Pennsylvania online library archive).[35]

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[33] Nicholas Olsberg, "Shattered Glass: The History of Architectural Photography". *The Architectural Review* (December 2013). https://www.architectural-review.com/essays/shattered-glass-the-history-of-architectural-photography.

[34] Ibid.

[35] Little information exists on the technical attributes of this photograph. At the lower right it mentions being an "Ink photo: Sprague & Co, London". Comparing it to other photographs of the building from the same year

The repercussions of the spread of photography can also be seen to have permeated the younger generations of architects through their familial and educational environments. It was these generations who grew up alongside the early rapid developments in photography, and who begin to discuss the role of photography, its potential and its context. As these young architects travelled and visited towns and cities to learn more about architecture by experiencing it at first hand, they now had the additional opportunity to travel virtually, viewing the architecture through photographs.[36] Instead of spending time in these architectural spaces, to experience them through their senses and draw them by hand, they were then able to snap a photo and move on to the next place. The question of skill that had established the need for new ways to create paintings for the bourgeoisie a few years earlier now impacted on the work of the draughtsman, who once more faced obsolescence. Through the photographic process the acquisition of architectural representations became not only instantaneous but also accurate, and apparently also everlasting.[37] So begins the age of visual consumption in architecture as it moves from modernity to the Modern.

Photography at the beginning of the architectural Modern

It was within such an environment that the young Charles-Édouard Jeanneret, yet to become Le Corbusier, pioneer Modernist designer, grew up and learnt about architecture. Beatriz Colomina, in her article "Le Corbusier and Photography", describes this exploration as fairly non-academic: Le Corbusier tried various methods and practices but lacked a fully professional approach.[38] Colomina points out that Le Corbusier appears to have emerged from this education with a relatively unaccommodating attitude towards the camera and at the same time a contradictory one, as later on he can be seen to make good use of photography in his work. Le Corbusier was twenty when he first travelled to Italy and Vienna, an experience which he later remembers as prompting a disappointing discovery on the photographic representation of architecture. In fact, the photographs he saw in architectural magazines, and even the ones he took of the buildings he visited, were a long way from his real experience of them. At this point Le Corbusier had already established his position regarding the photographic representation of architecture, which he considered insufficient. However, it is not

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found in *The American Architect* and *Building News*, it may possibly be a photogravure, a photograph etched into copper and printed traditionally with ink, original measuring approx. 21.6cm x 30cm.

[36] Eve Blau and Edward Kaufman, "Architecture and Travel in the Age of British Eclecticism". In *Architecture and Travel in the Age of British Eclecticism" in Architecture and Its Image: Four Centuries of Architectural: Works from the Collection of the Canadian Centre for Architecture* (Montréal: Canadian Centre for Architecture, 1989).

[37] The recent invention of photography is often found to be expressed through a romantic lens in various publications of the time, as seen, for example, in "The Temples of Athens and the Churches of Magdala," *The Architect: A Weekly Illustrated Journal of Art, Civil Engineering, and Building*, 1 (1869): 48.

[38] Beatriz Colomina. "Le Corbusier and Photography". *Assemblage*, 4 (October 1987): 8.

simply a matter of photography's representational capacity with which Le Corbusier found fault, but also its practice. For someone who placed such a high value on drawing, and for whom drawing was a method of thinking and researching, the spontaneity and facility of photography left a lot to be desired. Le Corbusier thought that the camera was "A tool for idlers, who use a machine to do their seeing for them",[39] and that it prevented the architect from spending their time seeing and experiencing the space in order to draw it, subsequently recording it with greater permanence than the taking of a photograph produced.

Despite his public position against photography, Le Corbusier had a "secret" interest in its practice. Several historians since have uncovered a large collection of photographs taken by Le Corbusier himself, many taken in a fairly professional manner, most as quick snapshots, and very few with any artistic value.[40] He appears to have been just as fascinated by the photographic medium as many of his predecessors and contemporaries, and acquired a number of cameras (three in fact) and took more than 6,000 photographs, showing an interest that goes beyond "dabbling" in this practice. Tim Benton, in *LC Foto: Le Corbusier Secret Photographer* (2013) examines these photographs and their mediums and follows the development of the architect's photographic work. As is known from Le Corbusier's words and Benton's analysis, however, Le Corbusier was adamantly against the use of photography as a means of capturing architecture, making this whole endeavour quite contradictory to that which Le Corbusier advocated. It is most telling that photography's ease of practice, access and visual creation has had a way to reach even the most obstinate "anti-photographers" and insinuate itself into their life and work.

In a few years after the architectural press began to incorporate photographs, completed architectural projects began to be represented almost invariably by photographs. These are the projects that the young Le Corbusier, who was eager to learn more about architecture during these early and formative travels between 1907-8, found in magazines such as *Innen Architektur* and *Deutsche Kunst*, which were recommended to him by his tutor Charles L'Éplattenier. Already the changes in architectural education were becoming more apparent through the use of photographs and the reference made to them, where spaces are communicated visually and promise a "reality" that is constructed. Le Corbusier soon discovered through his visits that the architecture that was presented

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[39] Le Corbusier, J. C. Palmes, *Creation Is a Patient Search* (New York: Praeger, 1960), 37.

[40] See: Tim Benton, *LC FOTO: Le Corbusier Secret Photographer* (Zurich: Lars Müller, 2013); Le Corbusier et al., *Le Corbusier and the Power of Photography* (London: Thames & Hudson, 2012), Le Corbusier, Stanislaus von Moos, Arthur Rüegg, Bard Graduate Center for Studies in the Decorative Arts, Stiftung 'Langmatt' Sidney und Jenny Brown, *Le Corbusier before Le Corbusier: Applied Arts, Architecture, Painting, Photography, 1907-1922* (New Haven, CT: Yale University Press, 2002), Daniel Naegele, "Seeing What is Not There Yet: Le Corbusier and the Architectural Space of Photographs", at: *INTER--Photography and Architecture,* at the University of Navarra, Spain, Nov. 2-4, 2016. (Navarra: Servicio de Publicaciones Universidad de Navarra, 2016), https://dr.lib.iastate.edu/handle/20.500.12876/10291.

was far from the reality. As Colomina points out, Le Corbusier's position towards the photographic representation of architecture reflects that of Adolf Loos, and the former was reluctant to acknowledge it as a valid extension of architectural understanding. Despite this, Le Corbusier recognised photography as part of the new media culture that was gaining ground and began to respond to it through what may be construed as an extension of his drawing methodology.

In this changing climate, where the architect's work was required to be visually represented through photography, Le Corbusier, who believed that photography as a spatial representation was incapable of accuracy and presenting reality, decided to take matters into his own hands. The editing of photographs before or after their development was already common practice, eliciting many questions regarding the veracity of the photographed subject and photography's link to reality. Le Corbusier had already found fault with the manner by which a photograph represented architecture and, like drawing architecture in a way that captured its real nature, he began to edit his photographs. For instance, in the article documenting the Villa Schwob that was published in *L'Esprit Nouveau* 6, 1921, the architecture was recreated by editing things out, polishing parts of it and making other various modifications (Fig. 10, 11). As seen in many of his other projects, Le Corbusier had the tendency to rework his projects, making edits and redrawing them multiple times throughout his life, long after they were built. The manipulation of photographs is merely an extension of this practice. Colomina, paraphrasing Stanislaus von Moos, writes that "when architecture is built, it gets mixed with the world of phenomena and necessarily loses its purity […] when this same built architectural piece enters the bi-dimensional space of the printed page it returns to the realm of ideas.". The photograph here, therefore, is a conceptual representation and not an actual one. This approach gives clarity to the position that architects such as Le Corbusier (and Henri Labrouste, as seen earlier in the chapter) held: they did not have the same admiration and fascination for photography's presumed realism but saw in it an additional conceptual mechanism to help them analyse and create.
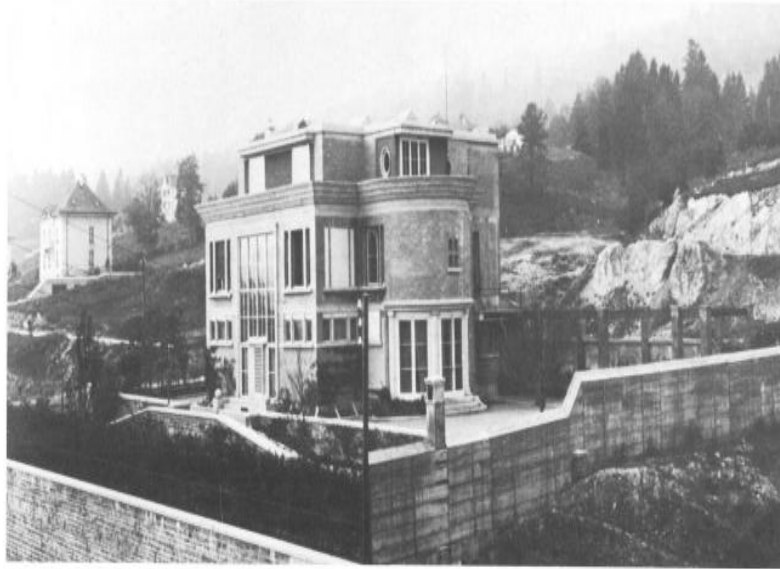
Figure 10. Villa Schwob by Le Corbusier, photograph c. 1920, photographer unknown. © Fondation Le Corbusier
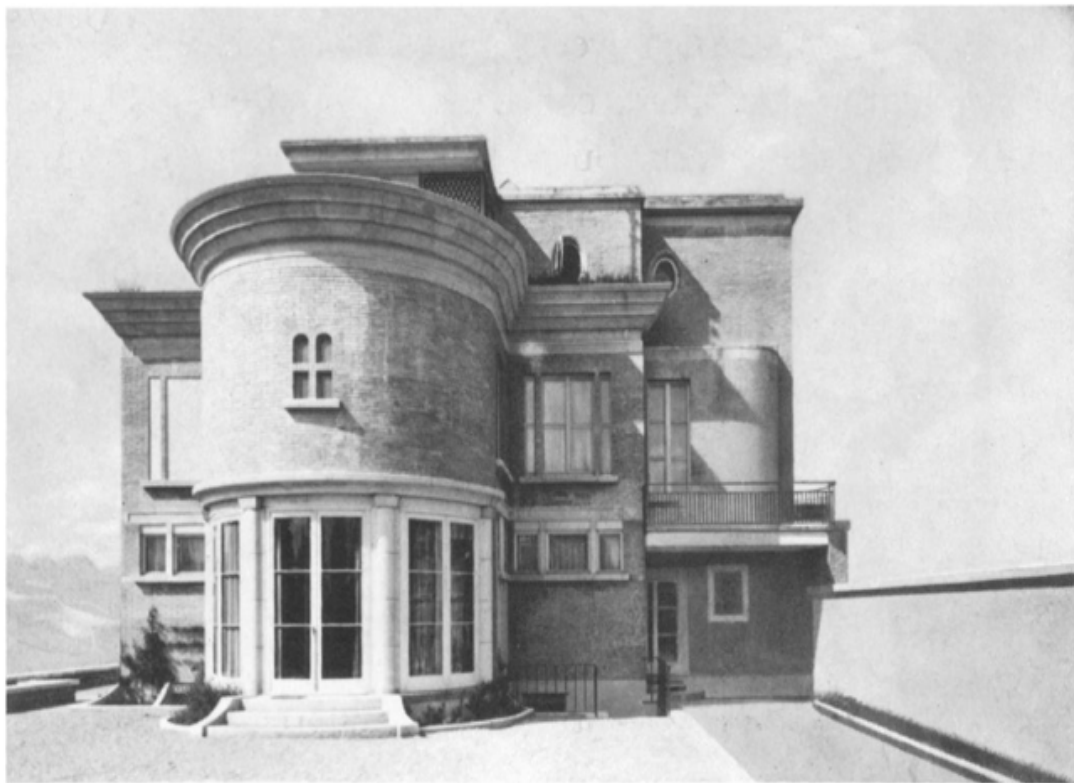
Figure 11. Le Corbusier, Villa Schwob, edited version of photograph c. 1920, (published in L'Esprit Nouveau 6, 1921). © Fondation Le Corbusier

Le Corbusier's understanding of drawing as a process of analysis, thought and "'appropriation' of the exterior world"[41] stems from the early definition of architecture as a profession in the Renaissance in which an architect's purpose was understood to be not so much about building

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[41] Colomina, 8.

but more about designing.[42] In the 1400s, Leon Battista Alberti's *De Re Aedificatoria* established the significance of drawing in architecture and made it clear that it was not only a medium of expression and communication but an architectural pursuit in its own right. A few centuries later the role of drawing as firmly embedded in architecture continued to the extent that new methods of visualisation appeared to fall within its established pedagogy. Le Corbusier is seen to use the photographs in a very similar way to drawings, and what might interestingly be considered today as a critical position against photography's presumed representation of reality was probably never one he adopted. Instead, it can be seen that in his *Vers une Architecture* Le Corbusier was testing the extent to which photographic manipulation accords with the pedagogy of drawing as a medium for conceptual production.
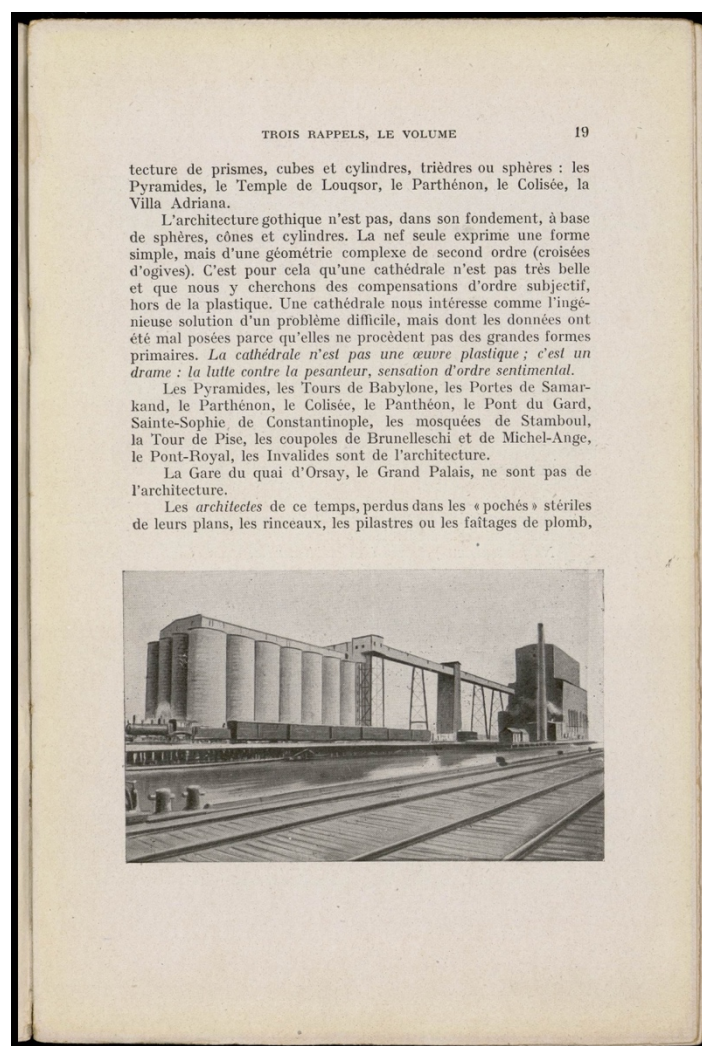
Figure 12. Pennsylvania elevator built for James Stewart & Co., Baltimore, edited photograph (published in Le Corbusier, Vers une Architecture,1925, 19.)

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[42] Leon Battista Alberti, Cosimo Bartoli, Giacomo Leoni, *The Architecture of Leon Battista Alberti in Ten Books; Of Painting in Three Books; and Of Statuary in One Book*. [The 1755 Leoni Edition]. (New York, NY: Dover Publications, 1986), 205-207.

20   VERS UNE ARCHITECTURE
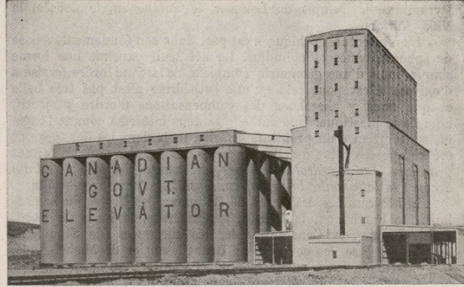
n'ont pas acquis la conception des volumes primaires. On ne leur a jamais appris cela à l'École des Beaux-Arts.

*Ne poursuivant pas une idée architecturale, mais simplement guidés par les effets du calcul (dérivé des principes qui gèrent notre univers) et la conception d'*UN ORGANE VIABLE, *les* INGÉNIEURS *d'aujourd'hui font emploi des éléments primaires et, les coordonnant suivant des règles, atteignent aux grandes émotions architecturales en faisant résonner ainsi l'œuvre humaine avec l'ordre universel.*

Voici des silos et des usines américaines, magnifiques PRÉMICES *du nouveau temps.* LES INGÉNIEURS AMÉRICAINS ÉCRASENT DE LEURS CALCULS L'ARCHITECTURE AGONISANTE.

Figure 13. Canadian elevator and silos, photograph (published in Le Corbusier, Vers une Architecture,1925)

In the book, Le Corbusier's photographs of industrial sites, such as a Pennsylvania grain elevator, enable a very graphic representation through heavy visual manipulation of the images – retouching, airbrushing, and other practices of altering specific features. The photographs are "constructed"[43] through a distinct view of relationships between forms and perceptive views that portray industrialisation and mass production, defining attributes of the developing culture of the time. The manipulation in the photograph was carried out in a number of stages: it was a photograph found in a Portland Cement Association booklet popularising the use of reinforced concrete: this was published in a cropped version in 1917 and then again in 1923 after being visually edited, bearing an

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[43] This includes both the structure of the photograph, as in the example of the Pennsylvania grain elevator that used lines of perspective to create dynamism, as well as the retouching and editing of the image that give emphasis to the subject for a more striking and graphic effect.

increased resemblance to a drawing,[44] in 1923.[45] As Andrzej Piotrowski points out,[46] Le Corbusier had begun to create this analogy between drawing and photography as a means of highlighting such architectural relationships after his trip to Italy in 1911, and through his distinctive repetitive methodology such relationships reappear throughout his work after this date, such as in this double spread in *Vers une Architecture* (Fig. 15), where such relationships are considered through similar visual graphics.
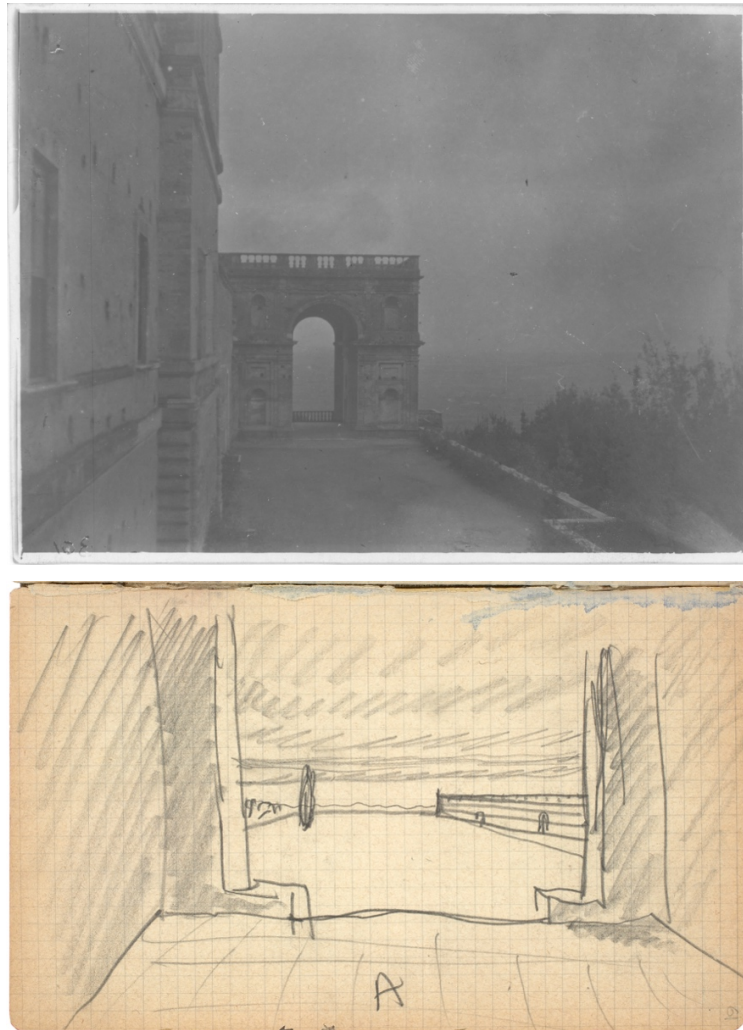
*Figure 14. Photograph of Villa d'Este and drawing of Hadrian's Villa, both by Le Corbusier, 1911[47]. ©
Fondation Le Corbusier*

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[44] Compared to other similar photographs of silos and elevators the Pennsylvanian elevator photograph seems to have fewer photographic qualities and instead looks more like a drawing. The detail and materiality are less prominent here, with lines having a brush-stroke effect, and objects are contoured and painted over. The comparison between Fig. 9 and 10 shows the differences between "drawing" and photograph.

[45] Andrzej Piotrowski. "Le Corbusier and the Representational Function of Photography", in *Camera Constructs: Photography, Architecture and the Modern City.*, ed. Timothy Wray and Andrew Higgot (London: Taylor and Francis, 2016).

[46] Ibid.

[47] Piotrowski.
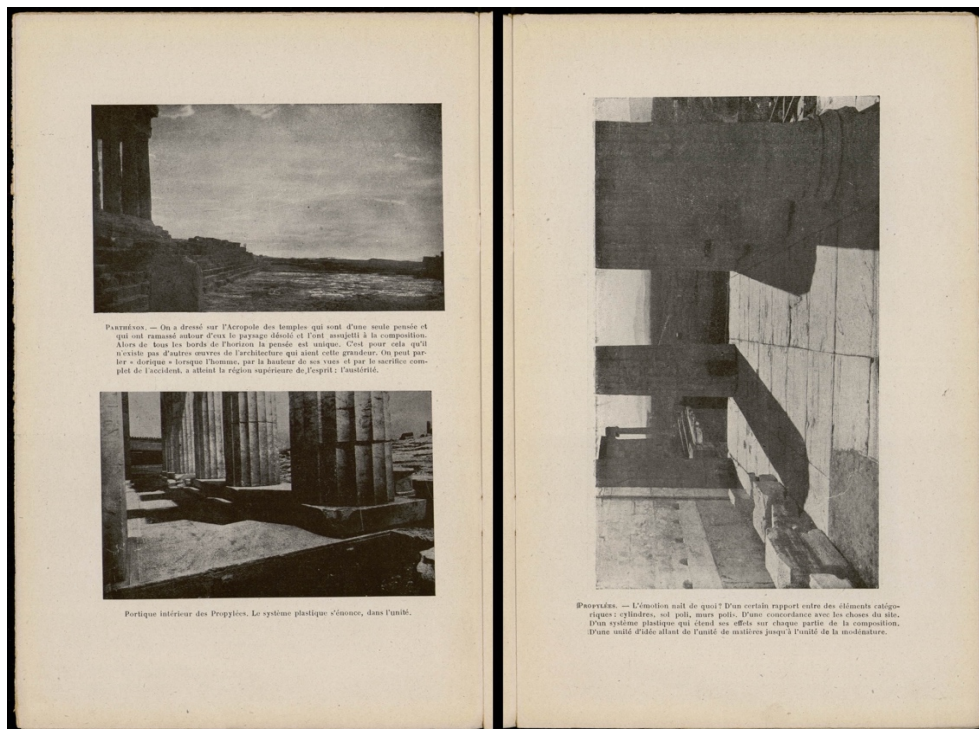
Figure 15. Pages 166 and 167 from Le Corbusier's Vers une architecture[48].© Fondation Le Corbusier

A fascination with industrial architecture, its photographic representation and the subsequent editing of these images to fit the architectural values of Modernism were already being seen in Walter Gropius's photographic collection and publications.[49] As will be explored later, Gropius was already implementing the role of photography within architectural discourse through a critical review of the changing industrial landscape, but here it is also clearly visible how much more widespread this photographic thinking was becoming through Gropius's work and interactions. Some of the industrial photographs that Gropius collected and had already published in the *Jahrbuch des Deutschen Werkbundes* to make his architectural arguments were edited and re-published by Le Corbusier in his *Vers une Architecture*.[50] The photographs were used as a medium of debate, transforming the subject of architecture into a photographic concept, a practice whose repercussions were not visible at the time to the participants in this debate. Gropius then implemented this photographic practice as a

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[48] Ibid.

[49] In 1911 Gropius gave his first public lecture, "Monumental Art and Industrial Building" at the Folkwang Museum in Hagen where he presented a series of his photographs of industrial buildings, including American silos. These photographs were published later in Walter Gropius's "The Development of Modern Industrial Architecture, 1913", in *Form and Function: a Source Book for the History of Architecture and Design 1890-1939*, ed. Tim Benton (London: Crosby Lockwood Staples, 1975), 53–55. They were later republished by Le Corbusier, Walter Curt Behrendt, Bruno Taut and others. More on his lecture can be found in Katie Lloyd Thomas, Tilo Amhoff, Nick Beech, *Industries of Architecture* (London; New York: Routledge, Taylor & Francis Group, 2016).

[50] Mike Christenson, "'From the Unknown to the Known': Transitions in the Architectural Vernacular". *Buildings & Landscapes* 18, no. 1 (2011): 5. https://doi.org/10.5749/buildland.18.1.0001.

means of visual and conceptual exploration in the newly founded Bauhaus school, thus establishing the foundation for the role of photography to grow within and around several different disciplines.
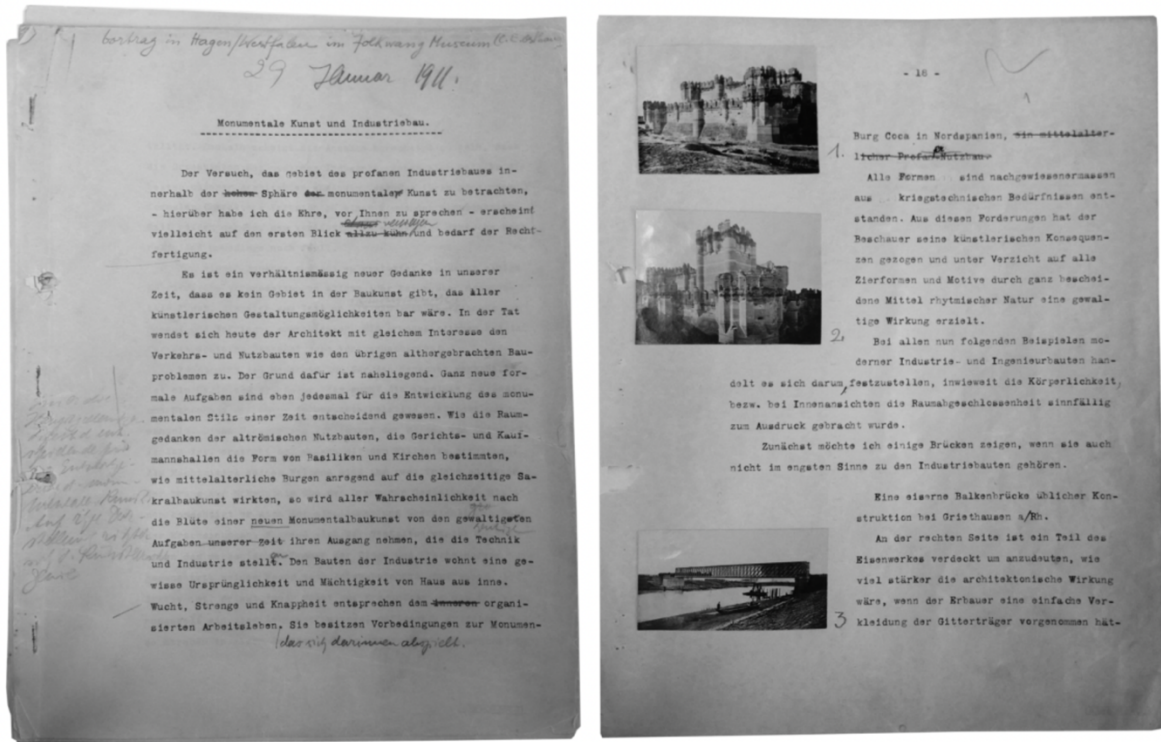
Figure 16. Pages 1 and 18 from Walter Gropius' lecture manuscript "Monumentale Kunst und Industriebau", 1911 (Bauhaus-Archiv Berlin)

Hartstein-Silo in Oberramstadt in Eisenbeton von derselben Firma.

63.

Riesen-Silo und Elevator der Baltimore & Ohio Eisenbahn-Gesellschaft in Baltimore, Architekt Long.
Ganz aus Eisenbeton konstruiert.

64.

Dakota-Elevator in Buffalo.
Der Mittelbau ist durch gewölbte Blechplatten zwischen eisernen Trägern hergestellt. Die Wandstärke ist also minimal, trotzdem ist eine mächtige körperliche Wirkung erzielt.

65.

Korn-Silo der Washburn Crosby Gesellschaft im Mühlendistrikt von Minneapolis, Nordamerika, aus Eisenbeton.

66.

Figure 17. Page 35 from Walter Gropius' lecture manuscript "Monumentale Kunst und Industriebau", 1911 (Bauhaus-Archiv Berlin)

Eggs and the Bauhaus

Although drawing has always been synonymous with architectural education, probably even before the Renaissance, its seminal role has resurfaced at particular moments and in various architectural institutions. Its role and purpose, as well as the part it played as a means of execution, have varied greatly, making it on the one hand a procedure involving commonly established rules and on the other a very personal undertaking. The learning of the art of drawing is very deeply linked with perception and interpretation, yet in architectural drawing the need to document the "truth" of architecture has led to various explorations of the means to transfer what is seen on to paper. In 1896 the University of Columbia published a book with instructions on architectural drawing;[51] focusing predominantly on the architectural student reader it describes various techniques in both freehand and draughtsmanship, amongst which some exercises involve the use of photographs as a basis for tracing over by hand with the aim of faithful representation. The difficulty in such faithfulness increases when the subject becomes less rectilinear and more organic, as is seen in examples of drawings of sculpture and the human form, which is why it is so frequently observed that in many elementary drawing classes the use of eggs became a common subject to initiate the student into drawing such forms.[52] The ovoid shape of the egg (including the irregular curvatures of the fragments of eggshell) introduces the challenge of perspective that can be faithfully expressed only through the effective use of shading. Its variety and ubiquity make it a subject that is easy to find, and to practise drawing, but further to this it represents an interesting study in architectural structure. The egg has for centuries been used as an exercise in structure and form, and in the Renaissance was a subject of structural inspiration in an anecdote about Brunelleschi's submission to design the dome of Santa Maria del Fiore in Florence.[53] It is thus not a mere coincidence that the egg also held a distinct place in the history of photography.

[51] William R. Ware, *The Study of Architectural Drawing in the School of Architecture* (Lyon: Livre de Lyon, 2020).

[52] Langdon S. Thompson, Diana Korzenik, University of the State of New York., Board of Regents, *Manual of Drawing: To Prepare Students for the Regents' Examination in Drawing* (Boston, MA; New York; Chicago, Ill.: D.C. Heath & Company, 1909), 17. See also: Charles Taylor, *A Familiar Treatise on Drawing, for Youth. Being an Elementary Introduction to the Fine Arts, Designed for the Instruction of Young Persons Whose Genius Leads Them to Study This Elegant and Useful Branch of Education* (London: Hatton Garden, 1815), 8.

[53] Mary D. Garrard, *Brunelleschi's Egg: Nature, Art, And Gender in Renaissance Italy* (Berkeley, CA: University of California Press, 2010), 41.

Figure 18. Iwao Yamawaki, Untitled (composition with egg and string), 1930-32, gelatin silver print on paper, 11.3 x 8 cm

Figure 19. Horacio Coppola, Still Life with Egg and Twine, 1932, gelatin silver print on paper, 20.7 x 25.7 cm

Figure 20. Ringl + Pit (Grete Stern and Ellen Auerbach), Columbus' Egg, 1930, gelatin silver print, 23.5 x 20 cm

A series of photographs taken some time between 1930 and 1932 by different photographers depict a variety of arrangements of eggs, most of them showing eggs and string and a few with eggs in other settings and alongside other common objects. Iwao Yamawaki's *Untitled* composition with egg and string, 1930-32, and Horacio Coppola's *Still Life with Egg and Twine*, 1932, are most representative of the former, while Ringl + Pit's (Grete Stern and Ellen Auerbach) *Columbus' Egg*, 1930, of the latter. They were all students at the Bauhaus, during which time they studied under Walter Peterhans, whose photography course was transformative in guiding architectural education.[54]

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[54] The Bauhaus holds particular significance in the development of architectural education, seen not only through Walter Gropius and Mies van der Rohe's teachings, but also through more contemporary views, as in Beatriz Colomina, Ignacio G. Galán, Evangelos Kotsioris, Anna-Maria Meister, *Radical Pedagogies* (Cambridge, MA: The MIT Press, 2022), 54, 120, 287. Also, Peterhans' presence in the Bauhaus is described as extraordinary and appears to have had a fundamental influence on its programme and its students alongside that of Moholy-Nagy. In Michael Siebenbrodt and Lutz Schöbe, *Bauhaus 1919-1933 Weimar-Dessau-Berlin* (New York: Parkstone International, 2009), 205, and Bauhaus Dessau, *Bauhaus Photography* (Cambridge, MA: The MIT Press, 1985), viii-xi.

Peterhans only taught at the Bauhaus for three years, between 1929 and 1933 when it was shut down by the Nazi regime; he continued a legacy of visual experimentation and exploration that had been started a few years earlier by László Moholy-Nagy and his movement "The New Vision". Peterhans continued practising within this movement, teaching this new visual approach first at the Department of Architecture of the Armour Institute in Chicago, then to architecture students at the Illinois Institute of Technology, which the Armour Institute became part of, and finally as one of the founding faculty at the Ulm School of Design in 1953.[55]

The Bauhaus was a hub of experimentation within and across a range of areas, and almost everyone there was experimenting with photography, a testament also to its spread and accessibility. It seems natural, therefore, that this would be where a shift in the relationship between photography and architecture would emerge. Indeed, Moholy-Nagy's visual explorations that eventually led to the formation of The New Vision did present an early turn from the traditional painterly representations of architecture in photography, but it was the shift towards a more independent role for photography that came with the establishment of a separate photography course that had a more fundamental impact. Moholy-Nagy's new ways of seeing and his use of photography to deal equally with forms, textures, materials, and surfaces began to introduce photography as something rather more than a factual representation and as a means to portray subjects of which a drawing would be a lesser representation.[56] His pedagogical book *The New Vision: From Material to Architecture* established a direct link between these photographic explorations and architectural education.[57]

This new means of seeing and representation generated by the enthusiasm for innovation among both students and tutors, as seen in the photographic explorations of Walter Funkat, Lucia Moholy and many others, gained further credence with the establishment in 1929 of a dedicated Photography course, led by Walter Peterhans. The new class continued building on The New Vision but now with a more disciplined attitude and a clear direction towards implementing photography as a means of advertising and with a focus on product photography. The creation of the class extended the potential of photography in advocating for its carefree use as a tool in other investigations and disciplines and allowed it to grow as a discipline in its own right. While the Bauhaus was quite late in establishing this distinction and gaining its own photography course, it succeeded in setting itself

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[55] Bauhaus Kooperation, 'Walter Peterhans: 1929–1933 Bauhaus Master'. *Bauhaus Kooperation* Accessed 5 April 2022. https://www.bauhauskooperation.com/knowledge/the-bauhaus/people/biography/948/.

[56] Pep Avilés, "Faktur, Photography and the Image of Labour on Moholy-Nagy's Textures", in *Dust & Data: Traces of the Bauhaus across 100 Years* (Leipzig: Spector Books, 2019), 62-84.

[57] The original publication was issued with the title *Von Material zu Architektur* in 1929 and was translated into English in 1932. Rayner Banham signifies the importance of this work as a connection between the Modern and post-war architecture, while Walter Gropius considered it as a directory of modern design. In Walter Gropius, 'Preface'. In *The New Vision; and, Abstract of an Artist* (New York: George Wittenborn, 1947), 5-6.

apart from other schools through the personalities leading the direction of photography at the Bauhaus and the increasingly prominent New Vision movement.
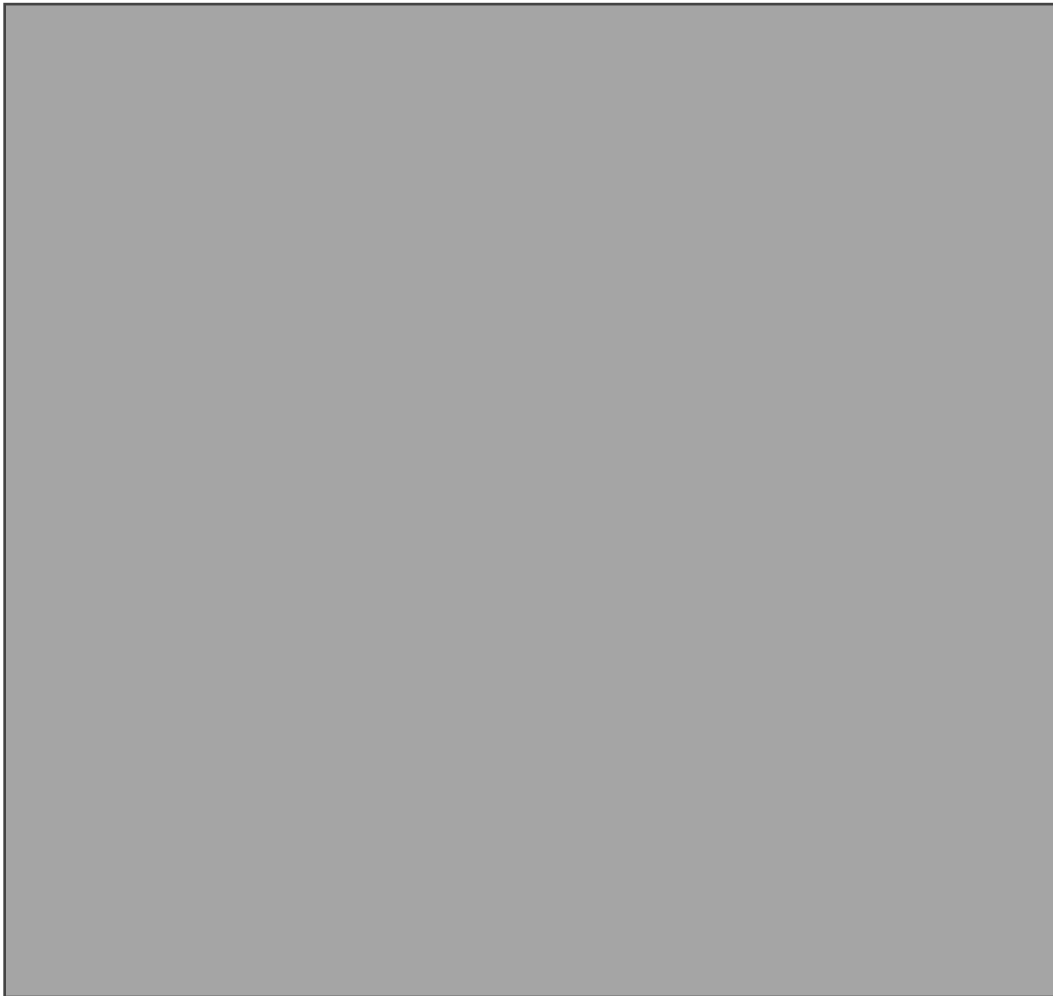
Figure 21. Walter Peterhans, Still life with floating egg (Stilleben mit schwebendem Ei), 1930, gelatin silver print, 22.9 x 23.9 cm

It was during these years of the photography class at the Bauhaus in Dessau that Peterhans assigned the exercise of photographing an arrangement with eggs. A number of these photographs exist, by both Peterhans himself and his students, but also by photographers who studied neither at the Bauhaus nor under Peterhans but who were intrigued by the assignment and replicated it.[58] The photographs portray a wide range of experimentation with forms, materials, and textures, giving an emphasis to the ovoid form of the eggs in contrast to the other elements. The almost ubiquitous string gives the arrangement a sense of process in progress: string was a common teaching aid, material for structural models and an aid in drawing (especially when dealing with curves), making the scenes appear as if they are part of someone's work studio. It also has a biological connotation, though, as

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[58] Carlotta Corprons, *Encircled Eggs* 1948, belongs thematically in this group.

can be seen in Salvador Dalí's *Eggs on the Plate without the Plate*, 1932, in which the string takes the role of the umbilical cord.[59] For Moholy-Nagy, texture was directly linked to biology as the originating agency for its formation. The arrangement thus takes on an even more nuanced meaning in the relationship between the organic form and texture of the egg and the material surfaces upon which it is placed, the string linking the biological agency of texture and the industrial agency of surface.

Figure 22. Salvador Dalí, "Eggs on the Plate without the Plate" (Œufs sur le plat (sans le plat)), 1932, oil on canvas, 60 x 41.9 cm

Peterhans' course, combined with Moholy-Nagy's pedagogy, had a significant impact on architectural education. Most directly it can be seen in the change in the architect Iwao Yamawaki's studies: Yamawaki initially entered the Bauhaus to study construction and development, but within a

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[59] Gilles Neret, *Salvador Dali, 1904-1989* (Köln: Taschen, 1997), 29.

few months had already switched to photography, attending Peterhans' class.[60] In his letters Yamawaki expresses his fascination with this new educational environment, and most of all his activity in the photography studio. He notes the inadequacy of his architectural background to respond to the rapid developments in photography and advertising and yet shows an enthusiasm for the possibilities it offered. Returning to Japan after the closure of the Bauhaus, Yamawaki continued to disseminate his learnings from the Bauhaus and attempted to take up architectural photography. Although Yamawaki's plans to promote this new photographic approach had not yet come to fruition in Japan, the teachings of Peterhans and Moholy-Nagy had already begun to permeate architectural discourse and were finding fertile ground in the West. Like Yamawaki, the students and teachers who emigrated during the war spread their newly developed ideas to neighbouring countries and most of all to the United States, where several institutions that welcomed them began to adopt them as their own. New photographic groups such as the 1950s West Coast Photography Movement began to develop as responses to The New Vision and other contemporary photographic approaches such as the 1930s Straight photography.[61] The newly independent photographic discipline, though, with its distinct movements and a burgeoning methodology of critical positioning, was now finding a place in architectural schools, no longer as a simple aid to drafting and documentation but as a new means of conceptual approach.

After finding refuge in the West, the ripple effect of the Bauhaus photography teaching meant that it came full circle back to its European roots after the end of the war. It is evident that the methods and methodologies that led to the development of the new visual movements and to the requirement for a separation of photography as a discipline in its own right continued to inspire creators and educators. Hans Finsler, a self-taught New Objectivity Swiss photographer, having established the first photography class at the Kunstgewerbeschule in Zurich, the Fotofachklasse, in 1932, evidently recreated experiments and exercises very similar to those conducted at the Bauhaus in earlier years. Teaching until 1957, Finsler was instrumental in the development of several well-known photographers such as Werner Bischof, René Burri, and Ernst Scheidegger and in establishing Moholy-Nagy and Peterhans' pedagogies as a standard educational approach. The egg once more took centre stage, as can be seen in one of the primary assignments in Finsler's class: every student would be asked to photograph eggs with a focus on their form and surface structure.[62]

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[60] Iwao Yamawaki, "Reminiscences of Dessau," *Design Issues* 2, no. 2 Autumn 1985): 63, and Siebenbrodt, *Bauhaus 1919-1933 Weimar-Dessau-Berlin,* 214.
[61] Otherwise known as "pure photography" it was a photographic approach defined by a representation of the subject in sharp focus and detail, as opposed to painting. Being protypically American, it was practiced and theorized by artists such as Alfred Stieglitz, Ansel Adams, and Paul Strand, many of whom later became practitioners of the West Coast Photographic Movement. Gil Pasternak, *The Handbook of Photography Studies* (Abingdon, Oxon: New York: Routledge, 2020).
[62] Henryetta Duerschlag, "Learning from Hans Finsler: Learning in Lockdown". *Anyone Corporation*, no. 49 (Summer 2020): 20.

Photography after the Modern
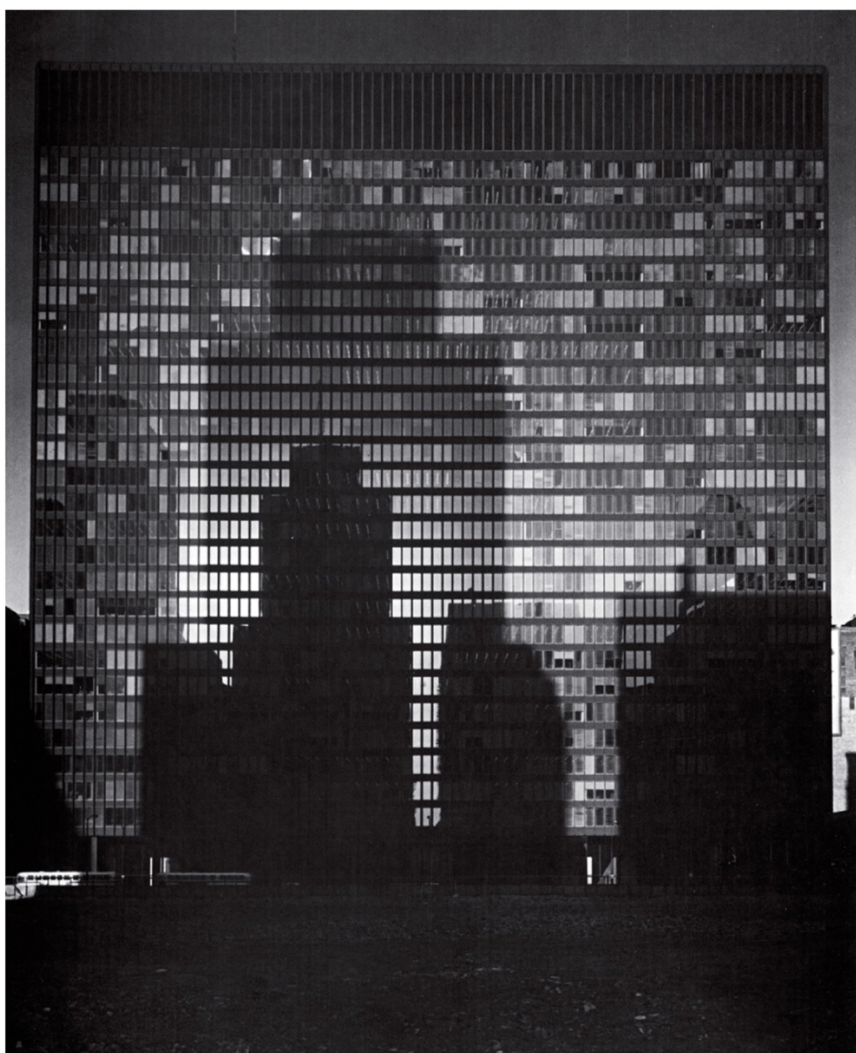
Figure 23. Ludwig Mies van der Rohe, Dirksen Federal building, 219 South Dearborn Street, photograph by Hedrich-Blessing, 1964, original in chromogenic print (Chicago History Museum), 29.43 x 35.39 cm[63]
© Hedrich-Blessing

Following on from Moholy-Nagy's The New Vision from material to architecture, photography re-entered architecture with a renewed role and focus, that of advertisement and product. Already architects such as Frank Lloyd Wright had found that photography was indeed a way to procure more clients: they commissioned their photographs not to achieve a faithful representation of

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[63] This photograph expresses a particular concept that goes beyond the simple representation of the architect's work, a creative approach seen in other works by the photographic studio. It was used as the cover for Tony Hiss, *Building Images: Seventy Years of Photography at Hedrich Blessing* (San Francisco, CA: Chronicle Books, 2000). Its title suggests the artistic expression and vision that Hedrich-Blessing implemented in their work, setting them apart from other architectural photographers at the time and resulting in many well-known architects commissioning them for their projects.

their project, to the same standard as a drawing, focusing on truthfulness and accuracy, but to make it more promotable. When he published his work in the pages of the *Sonderhefte* magazine in 1912, Wright commented that it was a "profitable" and "clean" way for an architect to benefit from the sale of his work.[64] The production of photography was now finding a new role in architecture as an instrumental part of the economy of architectural promotion that would continue to grow up to the present. This new promotional identity for photography within the field of architecture earned it a distinct role and definition that follows in the footsteps of product photography. The previous years had paved the way in the broader education in photography and its development, but, in the Bauhaus especially, where it had a direct interaction with architectural thought, early signs of architectural projects becoming products can be seen.

As Wright's words express, architects began to find a new value in the implementation of photography in their practice. It remained a medium of documentation, reference, and dissemination, but it also steadily grew to become an essential part of establishing one's work and promoting it for new business opportunities. Adopting techniques from advertising, the photographs of the new architecture were promising, inspiring and utopian. Architectural photography emerged as a distinct photographic practice, specialising in capturing new buildings and expressing their defining architectural values. In 1929, the Hedrich-Blessing photography studio began to document the shifting Modern movement buildings in Chicago, from those by Mies van der Rohe and Eero Saarinen to ones by Frank Lloyd Wright, Skidmore, Owings and Merrill and many other well-known architects.[65] Their practice represented the intersection that is often seen also in contemporary architectural photography practice, that of balancing promotion and art, aiming for the former through the aid of the latter to create seductive and impactful images. The promotion of architectural projects would often thereafter be superimposed on the project itself and having one's projects photographed by specific photographers would be considered a sign of acceptance and recognition as part of a broader architectural movement. Gradually, design's move towards the need to be photogenic can be discerned, with forms and materials chosen to attract the photographer's eye and assist in producing engaging images. Wright's Fallingwater is one such example, and was also noted as a particularly photogenic design by Ezra Stoller,[66] whose photographs of the building remain iconic, while Bill Hedrich's photograph of 1939 is rumoured to have inspired its name, besides visually underscoring

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[64] Kathryn Smith, "Chicago Architectural Club, 1894– 1914". In *Wright on Exhibit: Frank Lloyd Wright's Architectural Exhibitions* (Princeton, N.J.: Princeton University Press, 2017), 28.

[65] Hiss, *Building Images: Seventy Years of Photography at Hedrich Blessing.*

[66] Stoller's 1963 version is clearly inspired by Hedrich's as it is taken from almost the exact same position and direction. Signs of age are visible on the underside of the slab, yet the light and shadows from the surrounding foliage and the broader field of view succeed in giving a different experience of the building and its situation in the landscape.

it.[67] This self-created climate led photographers such as the Hedrich-Blessing studio, Julius Shulman, Stoller and others not only to represent a particular period of mid-century modern architecture, but also, through their association with architects and publishing media, to act as a medium to bring these projects to the attention of the public while influencing the direction of architectural focus.

Figure 24. Frank Lloyd Wright, "Fallingwater on Bear Run, Stewart Township, Fayette County, Pennsylvania", photograph by Bill Hedrich, gelatin silver print; 87 x 117 cm, 1939, (Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA). Signed by Frank Lloyd Wright at Taliesin on September 30, 1952.

"How can the viewer critically distance the Finnish Pavilion by Alvar Aalto (…) from the picture taken by the twenty-four-year-old Ezra Stoller? And where do we draw the line between Fallingwater by Frank Lloyd Wright and the photo by Hedrich Blessing looking up from the waterfall? Is the popular acknowledgment of the Kaufmann House in Palm Springs by Richard Neutra dependent on the pictorial account crafted by Julius Shulman, or not?*"[68]*

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[67] Franklin Toker, Frank Lloyd Wright, and E. J. Kaufmann, *Fallingwater Rising Frank Lloyd Wright, E.J. Kaufmann, and America's Most Extraordinary House* (New York: Knopf, 2012), 5.

[68] Pierluigi Serraino, "History's Rejects". *Hunch,* 3 (2001): 52.

Figure 25. Fallingwater, Mill Run, Pennsylvania, designed by Frank Lloyd Wright, 1963. Gelatin silver print; 54.6 x 43.8 cm. Carnegie Museum of Art, Purchase: gift of the Drue Heinz Trust. (Image courtesy of Carnegie Museum of Art, copyright Ezra Stoller/Esto, Yossi Milo Gallery).

Steadily, architectural photography inserted itself into architectural practice as an indispensable component of post-production, as well as pre-production, and technology's visual advancements, and the presence of a photographer in the architectural firm, or at least their collaboration, became essential for its success. In many instances photographers were educated as architects, as in the case of Balthazar Korab and Ezra Stoller, lending a very distinct architectural understanding to the production of architectural photography. In its own way architectural photography appears during this period to have developed in a vacuum with limited influences from the broader photographic world and "architectural photography" becoming a term closely associated with this form of the documentation and promotion of architecture.

The economic boom of the 1920s, and the later 1950s in the United States, provided opportunities not only for this architectural diversity and growth but also for the establishment of photography within the practice of architecture, inundating the profession with images and directing its focus towards visual presence. Images of the mid-century Modernist lifestyle, such as Shulman's photographs of Richard Neutra's luxurious Los Angeles houses or Balthazar Korab's fascinating

views of Saarinen's curvaceous TWA Flight Centre, became a representation of the wealth experienced in the 1950s and 1960s, offering the means for a critical consideration of what the future would look like. The financial crises of the 1970s and 1980s that followed, however, provided a chance to question this profusion of architectural images and the possibilities of photography in a climate that was less focused on construction.

The recessions not only transformed the environment but also the social perspective on their surroundings. In the 1970s artists had already begun to respond to these changes and there was a gradual turn from luxurious and seductive images of architecture to more analytical and interpretative images of the built landscape. Already, following the Great Depression of the late 1920s, photographers had turned towards nature and photographed a new vision in the footsteps of earlier pictorialism. Group f/64, created by Ansel Adams and Imogen Cunningham and other well-known photographers, depicted the natural landscapes of the American West, a refuge from the social struggles of the urban life and its economic difficulties. In the 1970s photographers were faced with a different issue, the decline in this natural landscape, where nature was permeated by human presence. The New Topographics, a movement named after the 1975 exhibition "New Topographics: Photographs of a Man-Altered Landscape",[69] brought this issue to the fore, defining this new landscape while finding a new means of photographic expression that departed from the utopian approach of Group f/64 towards a more critical and objective way of seeing.

These developments in art photography had deep repercussions on the understanding of its various facets. On the one hand, photography was an instrument: it documented and it promoted, the focus always remaining on the subject being photographed. On the other hand, this new invention was still exploring its possibilities and artists began to coordinate and formally establish its further capacities, drawing their focus from the subject alone towards the experience of "seeing" the photograph. As a result of the interactions between architecture and the art world, the inherent common interest in the new "ways of seeing", the landscape and the architectural subject, these ideas in photography gradually permeated architectural thought. The same economic situations that defined these movements in photography affected architects and opened up avenues for their communication. In the 1970s architects can be seen to consider alternative creative outlets and expressions of architectural design, and photography's unique attributes presented pathways that were both financially accessible and viable. Among these considerations radical architecture[70] emerged as a response to the arid state of architectural construction. It critiqued the existing social and political situations that resulted in ailing urban environments and promoted speculation and creativity for a

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[69] Curated by William Jenkins featuring among others the work of Robert Adams, Lewis Baltz, Stephen Shore, and Bernd and Hilla Becher. Robert Adams et al., *New Topographics : Photographs of a Man-Altered Landscape* (Rochester, N.Y: International Museum of Photography at George Eastman House, 1975).

[70] Represented by architectural collectives such as Archizoom and Superstudio in Italy, and Archigram in the United Kingdom.

better future. Radical architecture represents just one of various architectural responses taking place during this time, resonating with the apprehension about the changing climate and the developing critical approach of architecture towards such issues. Photography became a medium for some practices to express these new concepts: Superstudio intervened in the urban sprawl with their proposals to separate the urban and the natural, superimposing drawing on photographs, while other critical architects later expressed these considerations, seen in Rem Koolhaas' "Delirious New York" manifesto, that took the towers of New York and viewed them through fresh eyes, juxtaposing their photographs with their caricatured personalities.

Conclusion: In retrospect

It may seem to us today that we are living in a world of unprecedented profusion with photographs and other kinds of images, but during the early to mid-1900s the Western world was already undergoing a "photo-boom" phase that soon turned into "photo-inflation". In Germany, in particular, this phenomenon became particularly critical, as Olivier Lugon writes in his 2008 article "'Photo-Inflation': Image Profusion in German Photography, 1925-1945"[71] discussing how photography explored and found numerous applications, from the arts to the sciences and beyond, and how some of the key movements in photography, such as The New Vision and the New Objectivity emerged. It is with just cause that within this "predominance of the image", cultural theorists such as Roland Barthes and philosophers such as Walter Benjamin, among many others, began to be concerned about the direction of society and culture. Even many decades later their writings still resonate and are as relevant as ever, if not more so.

Considering how embedded the image and photography are in architecture, in its practice and mode of thinking, it is imperative now to review this period of continuous photo inflation and question how it has affected architecture in all its various aspects. Compared to the visual inundation of this earlier period it is possibly experienced on an even greater scale today,[72] with the added repercussion of visual desensitisation to the ubiquitous and pervasive presence of photography.[73] This has enabled the development and transformation of photography's role within architecture, with any

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[71] Olivier Lugon, "'Photo-Inflation": Image Profusion in German Photography, 1925–1945', *History of Photography* 32, no. 3 (1 September 2008): 219–34, https://doi.org/10.1080/03087290802018942.

[72] The predominance of the image and the role of the digital in this are subjects that concern the definition of the image and its understanding within the architectural discipline and question how architecture may progress from now on. This phenomenon is considered as "an immense cultural experiment" in John May and Bruno Latour, "Telemasis", in *Signal, Image, Architecture* (New York: Columbia Books on Architecture and the City, 2019).

[73] The media have had a fundamental role in this visual ubiquity and pervasiveness as expressed, in Catherine Slessor, "Image Rights and Wrongs: Architecture in the Age of Infinite Reproduction", *The Architectural Review*, August 2020, and in the broader spectrum of image and its repercussions in Hito Steyerl, "In Defense of the Poor Image", *E-Flux Journal*, no. 10 (November 2009).

interdisciplinary exchanges, new perspectives, and learnings to not be considered less at this time on their repercussions on architecture's identity and development. This appears in the earlier adoption and practices of photography, as seen in Labrouste's example, in Le Corbusier's contradictory relationship with photography and the adoption and transformation of photography within the Bauhaus. The following investigations and case studies attempt to explore and bring to light photography's underlying role and that of its theoretical and conceptual developments in the emergence and advancement of architectural ideas that might well be the defining elements of today's ocularcentric trajectory.

Reframing Typology

Introduction

In the mid-twentieth century the world was recovering from World War Two, in a socio-political and cultural atmosphere that had a direct impact on the arts with the emergence of movements such as Abstract Expressionism, Conceptualism, Pop art, and others that questioned everyday life – past, present, and future. Amid these developments, photography began to grow as a practice and as a distinct discipline that gradually influenced the development of other disciplines, accompanied by the emergence of a distinct photography movement, the Düsseldorf School of Photography. Through a new form of typological investigation, photography and architecture sought out a means to respond to these current circumstances and expand through it their disciplinary identities. The changing urban landscape of the 1960s that followed the destruction of the war, with the necessity to rebuild and the rapid redevelopment due to advances in technology and industrial production, required a new set of rules and definitions for its comprehension and for architects to re-position themselves in this new environment. While some parts of the landscape were trying to cope with an increasing demand for new developments, others became neglected or obsolete in the face of progress and were eventually dismantled, prompting a need to capture this architectural history, that was characterised by its impermanence. In this context, type became a medium that enabled a systematic approach of complex subjects, a common language for better comprehension of the changing environment, and, through its discourse, provided opportunities for typological applications and debates. The re-definition of typology allowed both architects and photographers to engage in this disciplinary debate, each from their own distinct approaches, but, as may be discovered later, probably not as separate as initially considered.

During this time, previously established architectural understandings of Modernism, of the ideal image of the city, experienced a shift. It became expressed through a new definition of type and typology – where typology expresses the discourse on type or its approach to structure or organisation[1] – that begins to emerge in the work of several architects in this time, but most prominently in the work of the Italian architect Aldo Rossi. Although not recognised as such until a few years later by another architectural historian and critic, Anthony Vidler,[2] this new form of architectural typology transformed architectural design and theory, entering a new chapter in its

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[1] Rafael Moneo, 'On Typology', *Oppositions* 13 (1978).

[2] Anthony Vidler, 'The Third Typology', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture, 1973-1984*, ed. K. Michael Hays (New York: Princeton Architectural Press, 1998).

historical development, and playing a seminal role in the way architects viewed and responded to the urban environment. This typology arose as a critical response to previous analytical approaches based on *nature* in the Renaissance and the Enlightenment, or later on the *machine*[3] during the Modern Movement, that were no longer sufficient in the contemporary landscape. The new typology, that Vidler coined "the third typology", expressed a new ontological definition, this time focusing on *the ontology of the city*, that constantly aims to "typify"[4] the various elements it engages with. However, this systematisation did not sideline the historical background, nor the visual component that identifies these elements. As is discussed later, Rossi in particular, employed the visual in various forms as a medium of developing his typological theory, a methodological approach that is not often explicitly linked to his theoretical work. Rossi's interest in photography and painting[5] portray a more detailed process of how his work led to this third emergence of typology and raises some compelling notions about how this typological emergence was congruous with other typological investigations of its time.

The second typological investigation explored within the context of the 1960s pertains to the work of the German photographers Bernd and Hilla Becher. Their photographic practice prompted a series of photographic developments, first and foremost being the establishment of Düsseldorf School of Photography[6] and its role in the recognition of photography as a distinct artistic discipline.[7] However, secondary ripples in the field of photography also emerged as a result of their practice, such as the establishment of the Düsseldorf School of Photography movement in which several of Bernd and Hilla Becher's students continue to reshape the role and identity of artistic photography well into the 2020s. In all of these developments the work of Bernd and Hilla Becher, and the movement they inspired, signified not only a turn in the disciplinary recognition of photography and its role in the arts,[8] but also set a precedent for the interrelationship of photography with other disciplines, particularly architecture: the Bechers developed their own form of photography of architectural landscape that incorporated a concern for, and a critical response to, the transformation this landscape was undergoing. Their work is, therefore, defined by a systematic methodology of research, analysis,

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[3] *Machine* is used interchangeably with *production*, the second being a direct result of the former.

[4] Rafael Moneo, 23.

[5] His photographic interest is expressed in detail in his autobiography – Aldo Rossi and Vincent Scully, *A Scientific Autobiography* (Cambridge, MA: MIT Press, 2010) – as well as through his longstanding relationship with photographer Luigi Ghirri.

[6] A frequent re-occurrence of its artists throughout the following book: Michael Fried, *Why Photography Matters as Art as Never Before* (London; New Haven, CT: Yale University Press, 2008).

[7] Michael Fried makes this statement indirectly through the timeline and the artists mentioned in his book *Why Photography Matters as Art as Never Before* in reference to the Düsseldorf School of photography, but the build-up to this was seen earlier in the United States through the emergence of various photographic movements and individual photographers who began to show their work in exhibitions, i.e., New Topographics, Group f.64, Walker Evans, Ansel Adams, etc.

[8] This is not only made clear throughout Michael Fried's book but is also a main point in Stefan Gronert, *The Düsseldorf School of Photography* (New York, N.Y.: Aperture: D.A.P./Distributed Art Publishers, 2009), 7.

and taxonomy that resulted in the creation of their distinct architectural typologies as expressed through photography.

Both typological investigations emerged in different parts of Europe at a similar time and are directly linked to other explorations and a renewed appreciation of artistic movements such as New Objectivity and Metaphysical art.[9] They also responded to the socio-economic changes of the time and in their own way played a significant role in the changes taking place in their distinctive disciplines. However, when seen in juxtaposition, these two typological approaches seem to be primarily an architectural investigation, either through typology or photography. And as so often is the case when architecture looks for inspiration and sources in other disciplines, here photography seems to play a salient role in both the emergence of the "third typology", as Vidler called it, and the analysis and critique of the contemporary architectural landscape. The following analysis of the work of these three key figures will highlight how, in these two directions of architectural typological investigation, photography, in its new-found interpretation, had a role in the development of architectural theory.
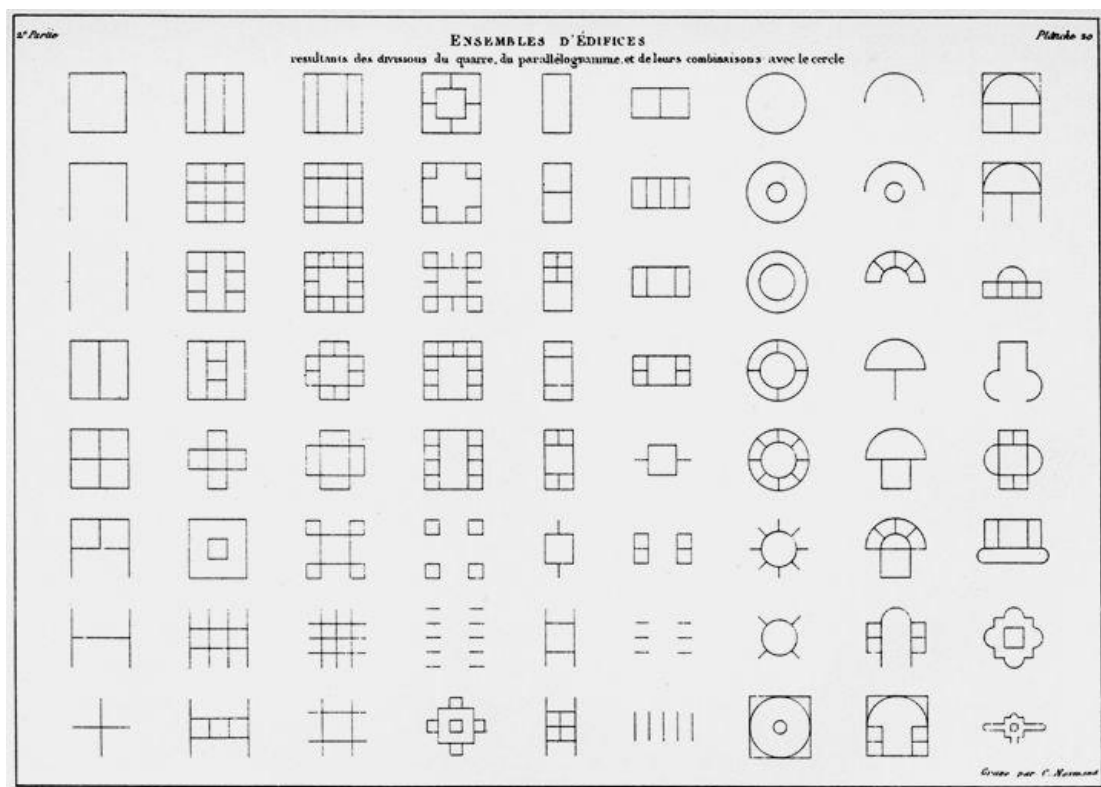
Figure 26. Jean-Nicolas-Louis Durand, Table 20, in Précis des leçons d'architecture, 1802-5.

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[9] Both were influential in developments in photography and film in the 1960s, i.e., Photorealism and Hyperrealism, or the work of Gerhard Richter and Michelangelo Antonioni. Bernd and Hilla Becher participated in their revival, in Lothar Romain and Detlef Bluemler, *Künstler: Kritisches Lexikon Der Gegenwartskunst* (Munich: Verlage Weltkunst und Bruckmann, 2014), 15.

The three typologies

As Rafael Moneo mentions, in *On Typology* (1978), the question of typology in architecture is synonymous with the nature of architecture itself. In an attempt to make sense of architecture, its surrounding environment, and design, architects turn to typology. It is a topic of investigation that has occupied the attention of architects up to the present day, and as a result has defined several forms of architectural typology through different investigations. Among these are three distinct forms that form the basis of modern architectural typological theory: they include three forms of architectural typology as expressed by Quatremère de Quincy (1755-1849), Jean-Nicolas-Louis Durand (1760-1834) and Aldo Rossi (1931-1997). Each of these is distinct in terms of subject and approach, and they share certain common aspects − among which is a strong interdisciplinary practice − that create a continuum of development, each constituting the building material for the formulation of the subsequent one. These architectural typological forms, while autonomous in their formalisation, are co-dependent on other disciplines and scientific fields, including archaeology, anthropology, and linguistics.[10] When the first two forms appeared, photography was non-existent – however, even when photography later began to emerge as a distinct discipline it was extremely rare for it to have any particular role in these typological formalisations of architecture. And, while the development of the first two typologies leaves little room for doubt, the timing and circumstances of the development of the third typology offer enough opportunities to begin considering whether photography had a larger role in its formation than was ever really acknowledged.

Before any such connections are attempted, however, a certain understanding of these three typologies and their development should be made clear, starting with what an architectural typology really means. The word "typology" derives from the Greek words "typos" and "logos": "typos" refers to an impression, or imprint, and thus to the notion of the model as a prototype, while "logos" conveys the notion of discourse. In a similar way, the two words "type" and "typology", originating from the same root and inextricably linked, hold slightly different meanings that change with each typological expression. In the early eighteenth century, during the Enlightenment, a general notion of categorisation first emerged through the systematic thinking towards rational classification. This prevailing way of thinking led to the publication of several encyclopaedias whose purpose was to organise rational information. One of these encyclopaedias was compiled by the archaeologist and architectural theorist Quatremère de Quincy, who was the first to document the typological approach in architecture in his *Encyclopedie Méthodique* (1789),[11] introducing a metaphorical theory of

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[10] Katharina Borsi, Tarsha Finney, and Pavlos Philippou, "Architectural Type and the Discourse of Urbanism." *The Journal of Architecture* 23, no. 7–8 (November 17, 2018): 1093–1103. https://doi.org/10.1080/13602365.2018.1513478.

[11] Quatremère was inspired by his predecessor abbe-Marc-Antoine Laugier (1713-1796) who attempted to find the origins of architectural type in the primitive hut in his "Essai sur l'architecture".

architectural "type". His definition was based on the concepts of origin, transformation, and invention, juxtaposing the concepts of "model" and "type", one as mechanical reproduction and the second as metaphor.[12]

> The word type presents less the image of the thing to copy or imitate completely, than the idea of an element which must itself serve as a rule for the model. […] The model, understood in the sense of practical execution, is an object that should be repeated as it is; contrariwise, the type is an object after which each artist can conceive works that bear no resemblance to each other. All is precise and given when it comes to the model, while all is more or less vague when it comes to the type.[13]

Quatremère's theory of type began by continuing the development of the theory of typological origin that had been initiated by Marc-Antoine Laugier, adapting it to his own concepts. Quatremère associated typological differences to social and topological factors. According to him, type was "rooted in the nature of the region, in historical notions, and in the monuments of the developed art themselves";[14] it derived from a human element and deviated from Laugier's theory of the "natural originator".[15] This human influence extends to the progress of architectural typology, where it is attributed to the concept of mimesis. In his work, Quatremère utilises the difference between "copy" and "imitation" to discuss the development of different architectural types; "To imitate does not necessarily mean to make a resemblance of a thing, for one could, without imitating the work, imitate its nature thus, in making not what she makes, but as she makes it, that is one can imitate nature in her action, when one does not imitate nature in her work."[16] By "resemblance" it is apparent that type is connected to appearance, which carries the notions of purpose, or "caractère". The latter refers to a theory by Germain Boffrand (1667-1754), which suggests that the appearance of a building conveys its function, and which Quatremère further employs to define typological language, or otherwise defining typological identities based on their physiognomy.[17]

During this time, classification, and therefore type and typology, were important in forming relations and analogies. This approach was necessary for the development of knowledge, which was

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[12] Rafael Moneo, 'On Typology', *Oppositions*, 13 (1978), 28.

[13] 'Type', in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy* [originally in the *Encyclopédie méthodique: Architecture*, vol 3, 1825]. Translated from French by Samir Younés (London: Andreas Papadakis Publishers, 2000), 254.

[14] From Quatremere de Quincy's republished article "Type", with an introduction by Anthony Vidler, in *Oppositions* 8 (Spring 1977), 149.

[15] Tanis Hinchcliffe, Extracts from '*The Encyclopedie Methodique D'architecture*', 9H, no. 7, 1985, p.28.

[16] Ibid. 36.

[17] Marina Lathouri, 'The City as a Project: Types, Typical Objects and Typologies', *Architectural Design* 81, no.1 (January 2011): 24.

considered to be rooted in history.[18] In this historical context, the question of the "origin" that was investigated by Quatremère through definitions of "copy" and "imitation" gradually began to take the form of abstraction and objectivity. Following in the footsteps of Laugier, another architectural theorist began to develop his own definition on typology, starting from the idea of type. J.N.L. Durand (1760-1834), inspired by the science of taxonomy, created inventories of building elements which resulted in his work *Recueil et parallèle des édifices de tout genre* (1801). His classification is based on function and form, and he proposes the concept of "composition", similar to Quatremère's possibilities of "imitation", a tool with which variations of "genres", as he calls them, can emerge to form typologies.[19] This systematic methodology resulted in the distillation of the building's composition to a "generic geometry of axis superimposed on the grid. [Therefore,] The connection between type and form disappeared."[20] Due to this dissociation and its economic and structural fundamentals, Durand's theory is considered to be the precursor of the "prototype", introducing an alternative view in response to the original question of the "origin".

Durand's theory, as it developed, began to lose recognition by the architects of his time, only to reappear, along with the term "typology", in the early twentieth century.[21] This signifies the second emergence of the notion of typology, and it was during this period that Durand's work took effect. His work found an audience after World War One, with the Modernists and their newly forming movement.[22] Modernist architects advocated the creation of a new architectural language that was free of the constraints of history and style, and in so doing discounted Quatremère's theories of typology. The question of the "origin" − and alongside it its historical context − ceases to concern the definition of "type" and instead type is redefined as a conceptual form of comparison that is formalised through "typology".[23] In contrast, Durand's approach to typology, as a generic analysis of geometry and its composition, resonated with the current industrialisation of architecture and its automation, as well as

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[18] Sam Jacoby. "Type versus Typology Introduction." *The Journal of Architecture* 20, no. 6 (November 2, 2015): 931–37. https://doi.org/10.1080/13602365.2015.1115600.

[19] Jean-Nicolas-Louis Durand, *Precis of the Lectures on Architecture* (Los Angeles, CA: Getty Research Institute, 2000).

[20] Rafael Moneo, "On Typology", *Oppositions*, 13 (1978): 29.

[21] Antoine Picon, "*From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand*" in Jean-Nicolas-Louis Durand, *Precis of the Lectures on Architecture*, (Los Angeles, CA: Getty Research Institute, 2000), 1.

[22] Their adoption of the typological doctrine was selective and made to fit their "scientific" and "abstractive" approach. In Sam Jacoby, "Typal and Typological Reasoning: A Diagrammatic Practice of Architecture", *The Journal of Architecture* 20, no. 6 (November 2015): 938–61, https://doi.org/10.1080/13602365.2015.1116104. Also observed in the notes of Leandro Madrazo, "Durand and the Science of Architecture", *Journal of Architectural Education* 48, no. 1 (1994): 12–24, https://doi.org/10.2307/1425306. Le Corbusier is a typical example of this adoption through his reification of the machine and its architectural possibilities: see Alexander R. Cuthbert, *The Form of Cities: Political Economy and Urban Design* (New York, N.Y.: John Wiley & Sons, 2008), 217.

[23] Sam Jacoby, "Type versus Typology Introduction," *The Journal of Architecture* 20, no. 6 (November 2, 2015): 931–37. https://doi.org/10.1080/13602365.2015.1115600.

the modern concept of architecture as "object". Durand's "type" is then replaced by the prototype, the unit that is multiplied and rearranged to produce architectural compositions. This is especially clear in Le Corbusier's Dom-Ino house and the use of its composition in the Plan Voisin and the Ville Radieuse projects.[24] Thus, while Modernism rejected "typology" in its traditional form, it re-invented it to comply with the current formalistic and industrial language, where type is both a generating process and the product.[25] Through this redefinition, "type" and "typology" were reduced to a functional classification of buildings, while at the same time consolidating both terms in a similar meaning.[26]

Typology, then, re-emerged for the third time during the second half of the twentieth century, following the end of World War Two. After the Modernists separated typology from its historical context, it was eventually reintroduced. Now typology might be seen as a combination of the previous interpretations, Quatremère's typology, with its historical reference, and Durand's scientific dissemination that was employed by the architects of the 1950s and 1960s[27] to read the city, which was becoming an intricate combination of evolution and permanence.[28] In *L'Architettura della città* (1966), Rossi identifies, as representative of type, the elements that remain constant in the evolving city,[29] through which the city can be analysed from the singular to the whole and that define the process of development not as an independent event, but as a series of changes resulting from external factors. Through this definition, Rossi rejects the Modernist's idea of the function-based type as too simplistic, and instead appropriates type to identify the common, at the same time using it as a means to give identity to the individual in the context of the whole. For Rossi, "type" is "the very idea of architecture, that which is closest to its essence" and "typology" is an "analytical moment of architecture".[30] This third typology, while it employs elements from the two earlier ones, can also be considered independently; although the previous iterations attempted to define a "natural" sequence between types, this typology is freed from their constraints and enables an unfettered reading of objects and their identities, beyond their historical context.[31] "Type" and "typology" thus become a

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[24] Moneo, "On Typology", p. 33.

[25] Lathouri, "The City as a Project: Types, Typical Objects and Typologies",

[26] Sam Jacoby. "Typal and Typological Reasoning: A Diagrammatic Practice of Architecture," *The Journal of Architecture* 20, no. 6 (November 2, 2015): 939, 940. https://doi.org/10.1080/13602365.2015.1116104.

[27] According to Lathouri, Saverio Muratori and Ernesto Rogers initiated the inquiry into the cultural continuity of the urban environment, which was then followed by Aldo Rossi and Giulio Carlo Argan, in Lathouri, 26.

[28] Christopher C. M. Lee, *The Fourth Typology; Dominant Type and the Idea of the City* (Delft: Department of Architecture and the Built Environment, Delft University of Technology, 2012), 207.

[29] Aldo Rossi, Diane Yvonne Ghirardo, Joan Ockman, Peter Eisenman, and Graham Foundation for Advanced Studies in the Fine Arts. *The Architecture of the City* (Cambridge, MA: MIT Press, 1982).

[30] Ibid., 41.

[31] Anthony Vidler, *"The Third Typology"* in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture, 1973-1984,* K. Michael Hays, ed., (New York: Princeton Architectural Press, 1998), 14.

means towards an understanding of the city, a "study", as Rossi often mentions, which begets the question of how his particular formalisation emerged.

Aldo Rossi's view of typology

Rossi's development of the third typology stays true to the scientific principles of typological definition which, as Vidler points out, is "based on reason and classification", shying away from more romantic approaches such as Gordon Cullen's view of type in his writing on "townscape".[32] Nevertheless, the manner in which Rossi views the urban landscape plays a significant role in the shaping of his typological definition. Through his writings and drawings his distinct view of the city and its components reveal the setting in which this third typology was formed. There is a balance between the individual "fragments" that make up the city and the city as a whole, as well as the function of these "fragments" that can only be defined in relation to the others. Therefore, it is of

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[32] Gordon Cullen, *The Concise Townscape* [1961] (Abingdon; New York: Architectural Press; Routledge, 2015).

particular interest to see how this relationship emerges from the singular to the multiple – which is in essence the manner by which this definition of type and typology emerges – and to understand how this is represented in Rossi's work.

Ideas on type were investigated in Rossi's writing, as well as his projects, including in many cases drawings that Rossi created and that accompany his theoretical work. In his memoir, *A Scientific Biography* (1981) Rossi states early on that he considers "craft or art to be a description of things and of ourselves", defining his drawings and writings as a conclusion of his experiences and theories.[33] Through these Rossi searches for definitions, a means to understanding from others' work as well as his own. He does not distinguish between craft and art, and throughout his memoir an enquiring disposition is visible through all kinds of sources that offer some kind of knowledge. Photographs, drawings, and sketches become the medium through which Rossi then sees and tries to form an understanding of the world. Each of these are instances that can always be described in more definitive terms, as singulars that are part of a larger whole. Indeed, in his memoir Rossi often mentions the notion of fragments and of moments[34] that have been definitive in his own development as a person and in his work. Occasionally, his approach resonates with a Hegelian rational categorisation, extracting the meaning of the subject to define it and using this as a means to attain a universal definition through the specific fragment or moment encountered. This "coherent orderliness of logic"[35] is seen to play a decisive role in the development of the third formalisation of architectural typology, where the fragment instructs the interpretation of type, and its contextualisation forms the definition of this particular typology of the city: "Thus, the complex structure of the city emerges from a discourse whose terms of reference are still somewhat fragmentary".[36]

In his memoir, Rossi's fragments are often linked to archaeological findings, historical buildings and parts of buildings, and not least to metaphorical connotations of the meaning of the word "fragment". This is taken a step further in his drawings of everyday objects scaled up as large as the buildings among which they stand.[37] In another drawing the fragments take a violent turn and buildings and objects are dispersed in an urban context with many of them in disarray, broken and falling apart. *L'Architecture assassinée* (1975), a painting by Rossi that was used for the cover of Manfredo Tafuri's *Architecture and Utopia: Design and Capitalist Development*,[38] depicts an "urban murder". The scene of this Rossi-esque city that lies broken and fragmented was used as a critical

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[33] Aldo Rossi and Vincent Scully. *A Scientific Autobiography* (Cambridge, MA: MIT Press, 2010), 1.

[34] Moments being described also as fragments of time, as seen in Rossi, Aldo, Diane Yvonne Ghirardo, Joan Ockman, Peter Eisenman, and Graham Foundation for Advanced Studies in the Fine Arts. *The Architecture of the City*. (Cambridge, MA: MIT Press, 1982), 35, 64, 66.

[35] Rossi, *The Architecture of the City*, 11.

[36] Ibid., 163.

[37] Aldo Rossi, "Piazza with central building", 1977.

[38] The painting was used as a cover to the English translation of Tafuri's work *Architecture and Utopia* (1976), published originally in Italian in 1972. In this edition the debate between Rossi and Tafuri appears to come full circle through the combination of text and image.

response to Tafuri's "suggestion that architecture as a project is 'dead'".[39] Rossi's visual representation of his ideas in this watercolour can be seen as an analysis of the urban environment from his unique viewpoint that encapsulates his understanding of the urban landscape and at the same time is a visual critique of current architectural debates.

Working at a time when Modernist architecture had reached its state of repletion, Rossi joined the critical revision of architecture that would lead to a new chapter for architectural discourse. As part of this critique of Modernism, Rossi viewed the contemporary urban landscape as a hopeless repetition of a failing modern experiment. He acknowledges the repetition of design and thinking as an issue which he often critiqued, as in the case of the aforementioned painting, but he also found in this a potential opportunity for discovery.[40] Historian Mary Louise Lobsinger identifies his systematic review of this repetition as an expression of observation, analysis and mimesis, a strategy Rossi often applied dialectically and practically through his designs in an effort to develop the existing and find meaning in the process.[41] As developed in his *A Scientific Autobiography*, this also takes the form of psychoanalysis that uses drawings as a medium of self-reflection, essentially replacing his architectural work.[42] Rossi often mentions words relating to repetition in his writing, and even more pertinently is found to recreate the same forms in his drawings. In *L'Architecture assassinée*, and its draft sketches, the same buildings and objects are found as in other drawings and paintings, such as the coffee maker, the buildings in cube form or on columns, and the towers. They are repeatedly drawn, altered in slight ways, and mixed to create different, yet very similar urban landscapes. Rossi sees these "objects" that take the form of either ordinary apparatuses or buildings as abstractions of urban elements and uses them as analogical or formal allegories of his own critical urban recreations.[43]

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[39] Teresa Stoppani. "L'Histoire Assassinée. Manfredo Tafuri and the Present." In S. Bandyopadhyay, J. Lomholt, N. Temple, R. Tobe (eds.), *The Humanities in Architectural Design: A Contemporary and Historical Perspective*, (London: Routledge, 2010), 214-225.

[40] Rossi, *A Scientific Autobiography*, 54.

[41] Mary Louise Lobsinger. "That Obscure Object of Desire: Autobiography and Repetition in the Work of Aldo Rossi." *Grey Room*, 8 (February 19, 2002): 39–61.

[42] Rafael Moneo, *Theoretical Anxiety and Design Strategies: In the Work of Eight Contemporary Architects*. (Cambridge, MA: The MIT Press, 2004), 101-144.

[43] Stoppani, "L'Histoire Assassinée. Manfredo Tafuri and the Present", 220.
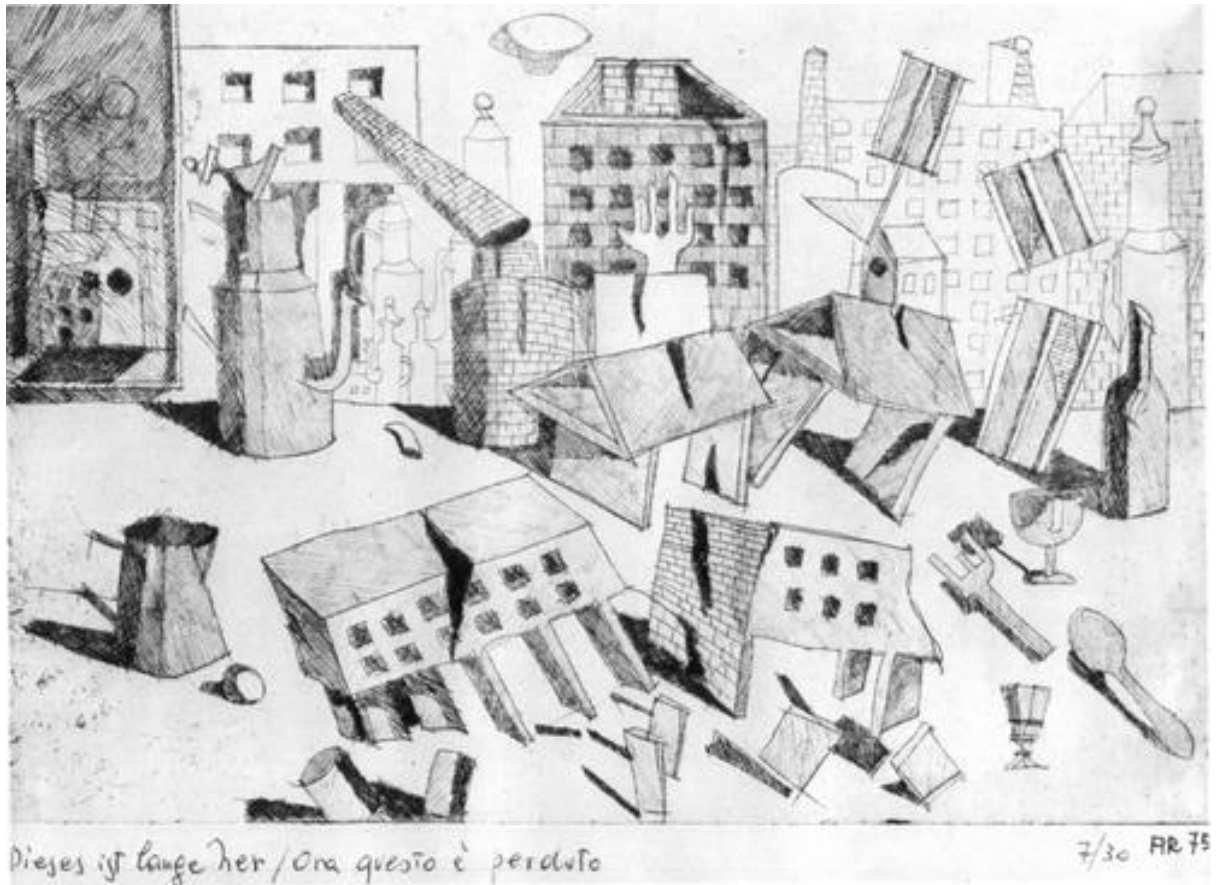
Figure 28. Aldo Rossi, Ora questo è perduto, 1975, drawing in pencil. [44] *In the centre background a form similar to Cimitero di San Cataldo is represented. © Eredi Aldo Rossi. Courtesy Fondazione Aldo Rossi. All rights reserved.*

Drawing analysis

Through his drawings, Rossi worked on his ideas and tested them by repeating the same forms and alternating their style of representation and composition. One of the most important of his paintings, *L'Architecture assassinée*, manages to graphically convey Rossi's critical position through the careful composition and representation of various objects; in order to reach this final arrangement Rossi experimented with a series of other variations. One of these sketches that is lost today presents a similar scene with a few variations. In this sketch the scene has three distinct parts. The background is a line drawing elevation of the city skyline, consisting of rectangular buildings with square windows, among which lie coffee-makers of various sizes. From the central perspective one of these buildings emerges − reminiscent of the Cimitero di San Cataldo − led by an industrial brick chimney, a tower, a couple of stepped-roof buildings, another coffee maker, and some other objects. In the foreground, fragments which are reminiscent of the Gallaratese housing D Block in Milan draws the eye, with

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[44] Aldo Rossi and Francesco Dal Co, I Quaderni Azzurri (Milano: Electa, 1999).

severe cracks, amid debris. The scene resembles a theatrical play, with the foreground as the main stage, a deserted plane where most of the "action" takes place. Compared with the latest drawing of *L'Architecture assassinée*, most of the elements remain the same, but slightly rearranged; the background gains dimensionally through a darker backdrop and some of the buildings are shown in perspective, and the coffee-makers and other everyday objects have been removed. The direct reference to an urban landscape is more clearly articulated: industrialisation is communicated through the cranes and towers in the background and the cracks and breaks in the buildings seem less intense, yet are conveyed as clearly.

Figure 29. Arduino Cantàfora, La Città Analoga, 1973, oil on canvas, approx. 701 x 200 cm. Milan, Museo del Novecento. © City of Milan. All rights reserved.
Front and centre lies a representation of the Monument to the Partisans.
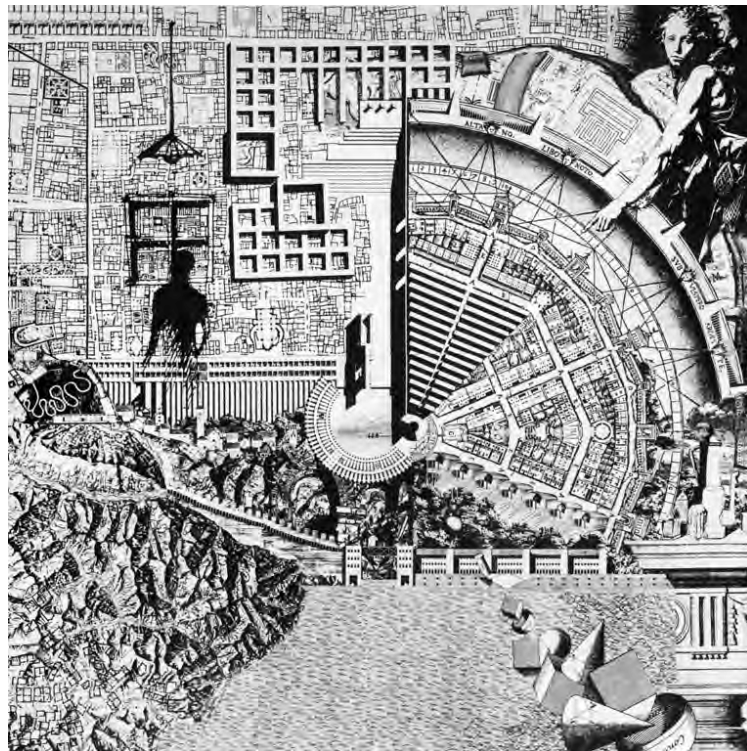
Figure 30. Aldo Rossi, Bruno Reichlin, Fabio Reinhart, Eraldo Consolascio, La Città Analoga, 1976, collage of paper, marker, Indian ink, gouache, and synthetic film on paper in black-and-white, approx. 230 x 240 cm (Venice Biennale of Architecture Archive). © Eredi Aldo Rossi. Courtesy Fondazione Aldo Rossi. All rights reserved.

Rossi places significant emphasis on "architectural composition", as is seen later in his work *La città analoga* (1976) and the synonymous work by his former colleague the painter Arduino Cantàfora, now considered to be related to Neo-Rationalism and the Italian Tendenza.[45] There is a theatricality in the way he presents architecture, that for him is alive and "tragic".[46] This work, along with his earlier drawings and paintings, represents his theories in a visual format,[47] and once again becomes a subject for debate between Rossi and Tafuri.[48] Even though very different to the ones executed previously, this project signifies a turn in Rossi's approach that does not align with the typological investigations expressed in his more formalistic drawings such as *L'Architecture assassinée*. In these earlier drawings, type is explored through the repeating forms that are continuously questioned and examined. Architectural projects such as the cemetery and the housing block are repeatedly drawn in various situations, a study which Rossi discusses in his *I Quaderni Azzurri*, in which he explores the issue of architecture and its visual composition through these building forms and other urban types.[49] These various compositional studies express both a representation of the existing urban landscape distilled to its types, including forms of modern architecture and industrial buildings, and Rossi's architectural forms through which he attempts to find the essence of architecture but without disturbing the unity of the urban landscape in which they reside.

[45] Pablo Martínez Capdevila. "An Italian Querelle: Radical vs. Tendenza." *Log* 40 (2017): 67–81.

[46] Gina Oliva. "Da 'L'Architettura Della Città' Al Teatro Del Mondo La Dimensione Tragica Dell'architettura di Aldo Rossi Tra Razionalità e Pathos." *Hortus - Rivista on-Line Del Dipartimento Architettura e Progetto - "Sapienza" Università Di Roma* 3 (2007). http://www.vg-hortus.it/index.php?option=com_content&task=view&id=54&Itemid=39.

[47] Aldo Rossi. "'La Città Analoga: Tavola / The Analogical City: Plate.'" *Lotus* 13 (1976): 5–8.

[48] Manfredo Tafuri. "'Ceci n'Est Pas Une Ville.'" *Lotus* 13 (1976): 10–13.

[49] Aldo Rossi and Francesco Dal Co. *I quaderni azzurri* (Milano: Electa, 1999).
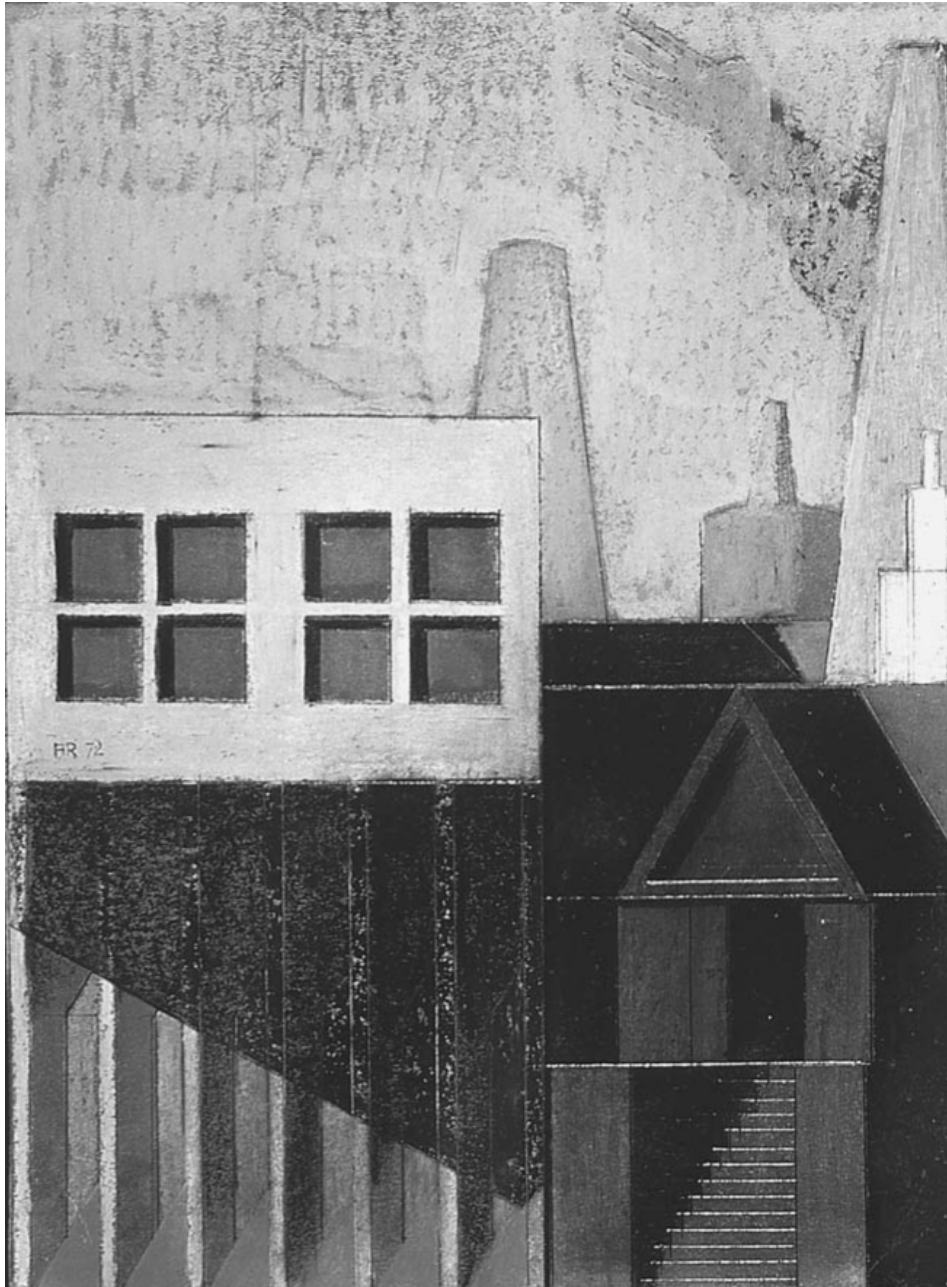
Figure 31. Aldo Rossi, Città con Architetture e Monumenti (1972), pencil and oil, original in colour above, (in Aldo Rossi Papers, 1943-1999, 880319, Research Library, The Getty Research Institute, Los Angeles). © J. Paul Getty Trust

In another painting that Rossi made in 1972, the *Città con Architetture e Monumenti*, a denser composition may be viewed that evokes several visual and theoretical ideas that were prominent in the 1960s and which will also be explored later in the work of the photographers Bernd and Hilla Becher. The main subject of the scene that unfolds here is two buildings, the forms of which closely resemble the Gallaratese housing D Block (1972) and the Monument to the Partisans (1965), the first presented as a front-facing elevation and the second as a slightly left-facing elevation. While the buildings here are not exactly the same as these projects, they evoke the geometries that define them, producing an uncanny feeling of familiarity. In the background industrial towers reach to the sky, setting the scene

in a modern urban context. The background grounds the scene in a contemporary timeframe and a "real" urban landscape. The industrial elements play the role of historical context, relics from a recent past that are slowly being overtaken by architecture such as the buildings in the foreground. The bold colours (this is judged from other similar drawings) and the intense shadows are artistic references to de Chirico's work − with whose work Rossi is often compared[50] − and suspend the scene in time. This adds to the feeling of melancholy, as Diogo Seixas Lopes expands on in his book *Melancholy and Architecture: On Aldo Rossi* (1990), a sentiment that was common in post-war Italy, and that is expressed here through artistic references to other Surrealist artists who evoked similar sentiments in their work. However, in Rossi's painting there is an absence of what is most commonly observed in de Chirico's paintings – the deep perspective views, the angled lines that inspire stronger feelings. The composition of Rossi's painting is structural and quite strict: the protagonist buildings are comprised of basic platonic solids and simple square, rectangular, and triangular shapes. This is further exemplified by the lines, that follow a strict vertical, horizontal and 45-degree angle. Were it not for the lack of shadows, this could have been easily considered an objective representation of the subject, a deadpan view lacking sentiment. Yet Rossi balances between objectivity and subjectivity, reconstructing an urban landscape without erasing the past and using his own interpretation of type to confront the issues of the past.

Photographic approach

Rossi's paintings prompt another source of visual and methodological investigation, photography as a practice and as an object. When discussed in relation to photography Rossi's name is often accompanied by that of Luigi Ghirri,[51] a photographer, artist, curator, and writer who maintained a long friendship with the architect. Rossi met Ghirri in 1983 when the art critic Vittorio Savi suggested to Ghirri that he adopt a more landscape and architectural approach in his photography of the Po Valley. As a response, Ghirri photographed Rossi's San Cataldo cemetery in Modena for *Lotus International* magazine.[52] Thus began a long and fruitful relationship between architect and photographer that influenced both of their work. Rossi, who already had an interest in photography,

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[50] Patrizia Lombardo. "Aldo Rossi: The White Walls of the City." In *Cities, Words and Images: From Poe to Scorsese*, (London: Palgrave Macmillan UK, 2003), 96–107. https://doi.org/10.1057/9780230286696_5.
Diogo Seixas. Lopes, *Melancholy and Architecture: On Aldo Rossi* (Zürich: Park Books, 2015).
David Murray. "Architecture and Shadow," *Journal of the Graduate School of Fine Arts, University of Pennsylvania* (1990).
[51] Luigi Ghirri et al., *Luigi Ghirri, Aldo Rossi: Things Which Are Only Themselves* (Milano: Electa, 1996),
Juan José Lahuerta and Jesús Escobar, 'Aldo Rossi, Palazzo Dell'Arte, Milan, 5 November 1999-9 January 2000, Review', *Journal of the Society of Architectural Historians* 59, no. 3 (2000): 378–79, https://doi.org/10.2307/991652, Diane Ghirardo, 'The Blue of Aldo Rossi's Sky', *AA Files*, 70 (2015): 159–72.
[52] Luigi Ghirri, Lotus International, no.38, 1983.

recognised that through Ghirri's photographs he saw new facets of his work and that the subject – in this case Rossi's architectural work – could be critically expressed anew through the photographer's lens.[53] A certain "symbiosis"[54] emerged that went beyond capturing a view of something built, focusing more on the analysis and reiteration of the essence of the subject, a concept that resonates strongly with Rossi's methodology.

Even though this interaction came later in Rossi's life, it acted as a confirmation of what was already beginning to become clear through his visual work. In his autobiography, Rossi often mentions the central role that photographs played in his life, from documenting his findings to analysing his subjects. He photographs cities, buildings and objects of all sorts, and uses these as references, as mediums of analysis and sometimes even as objects. They are at the heart of his efforts to define his "fragments" and his various photographs of Italian cities and landscapes are essential in the urban and architectural analysis that led to his typological investigation. Whether as a collector or an amateur photographer – he mentions a particular fascination with a Polaroid camera he used to capture buildings and spaces that caught his interest[55] – photography played a major role in his theoretical and practical development. Through his later collaboration and friendship with Ghirri, Rossi seems to re-evaluate photography as a practice and as an artistic medium. This allows him to focus his interest on photography and clarify it as a conscious approach, finding in Ghirri's work an experienced photographic practice and architectural analysis that complemented and furthered his own investigations and inquiries.

In *L'Architettura della Città*, Rossi expands on his theoretical work, following a similar pattern to that of his contemporaries Robert Venturi, in his *Complexity and Contradiction in Architecture* (1966), and Vittorio Gregotti, in his *Il Territorio dell'Architettura* (1966). The work is largely developed through text, with the occasional drawing and photograph to create the narrative links. What he described and developed as the third typological formalisation in this book, however, is seen expressed in much clearer and more direct ways in his drawings in the 1970s. In retrospect, Rossi's contribution to the re-emergence of architectural typological investigations can be seen as an emotionally fraught struggle to understand and face the repercussions of modernity on architecture and the overall built environment. These feelings are portrayed in his drawings and paintings with the use of forms and compositions that convey messages through their presentation. On the other hand, an

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[53] Jacopo Benci and Marina Spunta. *Luigi Ghirri and the Photography of Place: Interdisciplinary Perspectives*, (Bern: Peter Lang, 2017).

[54] A term Elias Redstone mentions regarding the two-way relationship between architects and photographers in an interview for Dezeen magazine, Anna Winston, "'Le Corbusier was incredibly attuned to the power of photography,' says Barbican exhibition curator", September 24, 2014, https://www.dezeen.com/2014/09/25/barbican-constructing-worlds-photography-exhibition-le-corbusier-elias-redstone/#

[55] Diane Y. F. Ghirardo. *Aldo Rossi and the Spirit of Architecture*. (New Haven, CT; London: Yale University Press, 2019), 2.

attempt to rationalise and analyse them can be discerned in his texts. Together with these visual representations they comprise a methodology of architectural investigation that attempts to provide a visual language to architecture so that through its taxonomies and categorisations can be analysed, comprehended, and employed as part of other studies.

A New School of Photography

During the third formalisation of architectural typology in Italy, a different typological investigation was developing in Germany, in art and photography. This form of typological formalisation emerged from its own setting, having little to do with what seems to have been transpiring in architecture at the time, yet inherently linked to it through its focus and ensuing outcomes. This investigation, besides the scientific and interdisciplinary background that was analysed earlier, appears to have also developed through both a history of painting and industrialisation, following a different purpose from that of attempting to define and understand the current landscape: instead, it aimed to preserve and respond to the rapidly changing environment. In part, the development of this typology appeared through a gradual progression of distinct ideas and movements emerging in Düsseldorf through its evolution and, in part, represents only one of several similar critical and conceptual approaches that stemmed from the events and artistic explorations that were taking place there that will be discussed in later chapters, that will explore the far-reaching influence of these developments. Düsseldorf's long tradition of painting and also its industrialisation appears integral to the developments that followed in relation to Bernd and Hilla Becher's work: in 1976 one of the first academically recognised schools solely dedicated to photography as an art form was established, from which an artistic movement emerged, its ripples still felt in recent developments in photography. This history can be traced back to the foundation of the Kunstakademie, its relationship with its location, the historical events it survived, the movements that found fertile ground, and its international network that helped to spread both its reputation to the rest of the artistic world and the new ideas that emerged within its walls.
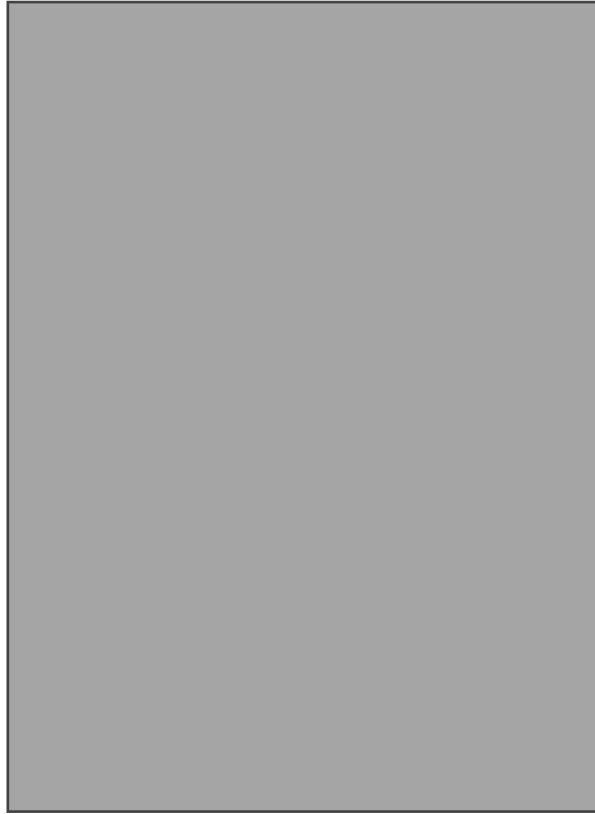
Figure 32. Friedrich Wilhelm von Schadow, Mutter mit Kind, 1823, oil on canvas, 19 x 14 cm.
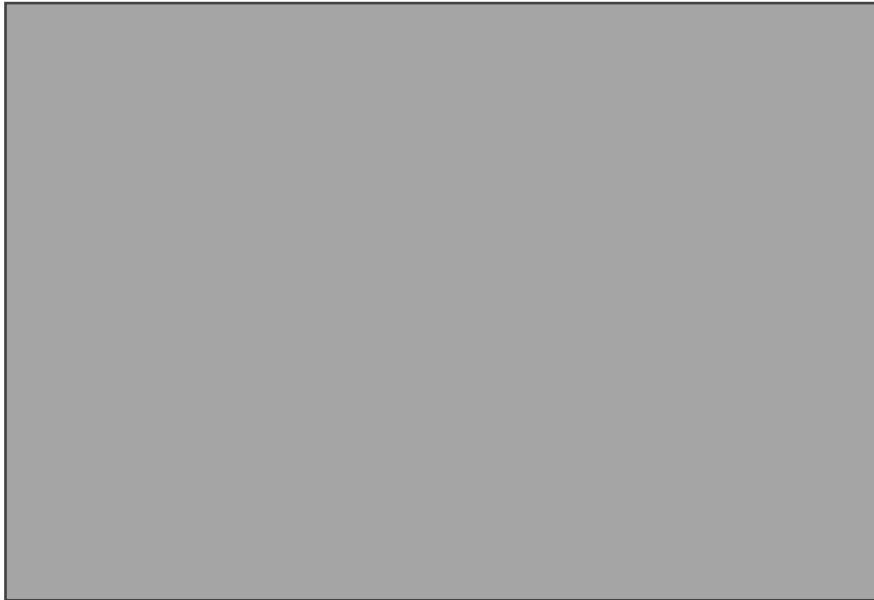
Figure 33. Andreas Achenbach, Fischerboot am stürmischen Strand, 1863 Oil on wood, 25 x 37 cm.

From a visual perspective, the Düsseldorf School of Photography can trace its influences back to the Kunstakademie Düsseldorf's initial foundation as a school of drawing (1762),[56] and painting (1773). It soon became known for its teaching of landscape painting, particularly in the Nazarene and Romantic style,[57] followed by Realism and naturalism, using *plein air* methods and muted colours,[58] later focusing increasingly on monumental painting.[59] Parallel to these artistic explorations, in the early 1900s the Kunstakademie's teaching began to include other disciplinary approaches, including architecture, after merging with the School of Applied Arts. Peter Behrens[60] and other influential architects[61] joined its staff, reforming its educational system and promoting an architectural vision. Behrens then became an integral part in the future of the Kunstakademie through his founding of the German Werkbund, an association of architects, craftsmen, artists and industrial designers, connecting the school with the development of Modernism in architectural and industrial design (Neues Bauen/Neues Sachlichkeit, or New Objectivity) and later influencing the creation of the Bauhaus school by Werkbund architect Walter Gropius.[62]

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[56] Founded in 1762 by German painter Lambert Krahe. See: Heinz Peters, "Wilhelm Lambert Krahe and the founding of the Art Academy in Düsseldorf." In: Eduard Trier (ed.): *Two Hundred Years Art Academy Düsseldorf.* Düsseldorf: Schwann, 1973), 1.

[57] Stefan Gronert and David Henry Wilson. *The Düsseldorf School of Photography.* (New York: Aperture, 2010), 7.

[58] As can be seen in paintings of prominent German artists Wilhelm von Schadow, Andreas Achenbach, and Norwegian painter Johan Fredrik Eckersberg, whose work spread the School's influence. Andreas Achenbach founded the German realistic school, which flourished after 1835 in Munich, while many American painters came to study in Düsseldorf, thus considerably influencing the Hudson River School in the United States and American landscape painting. The American and German-American painters Worthington Whittredge and Emanuel Leutze studied in Düsseldorf and found renown in America. Their work is an example of the Romantic style that was exercised in the Kunstakademie and continued to flourish abroad.

[59] In 1871 the German Reich was founded and a new appreciation for monumental art was instilled at the Academy, with persecuted staff being replaced by more agreeable personalities, as was the case with Paul Klee's replacement with Leo Sebastian Humer. James A. Van Dyke. *Franz Radziwill and the Contradiction of German Art History, 1919-45* (Ann Arbor, MI: University of Michigan Press, 2011), 110.

[60] Peter Behrens taught at the Kunstakademie between 1904-7, leaving in 1907 to establish the German Werkbund.

[61] i.e., Johannes Ludovicus Mathieu Lauweriks.

[62] Kenneth Frampton, *Modern Architecture, a Critical History* (London: Thames and Hudson, 2007), 115, 123.

Figure 34. Peter Behrens, AEG Turbine Hall, completed in 1909, photographer unknown, 1928, (Siemens AEG).

During these years there was a parallel development at the Kunstakademie in the art of landscape representation, artistic expression, and architecture. Despite the tumultuous period after World War One and the German Reich,[63] the school offered new classes in stage design and printmaking and new directions were initiated in the arts. The role of the painter and sculptor Ewald Mataré (1887-1965) and later Joseph Beuys (1921-1986) at the school set the tone for this artistic and disciplinary transformation and the establishment of the contemporary artistic scene that followed.[64] Beuys, "One of the most important and controversial German artists of the late 20th century",[65] alongside his notable colleagues[66] Klaus Rinke, Gerhard Richter, Bernd Becher, Thomas Demand, K.O. Götz and theorist Oswald Wiener, contributed to the emergence of influential artistic movements and the 1960s boom "which might justly, and without parochial prejudice, be called the 'Düsseldorf Art Miracle'".[67]

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[63] Under the German Reich the direction of the Academy often changed to include teachers that expressed the German culture of the time. Paul Klee, Karl Hofer and the director of the school until 1933, Walter Kaesbach, were some of the teachers that were persecuted and had to leave the school. The National Socialist art style was instead promoted under the professorship of painter Werner Peiner, whose monumental tapestries hung in the New Reich Chancellery and whose name was included in Hitler's list of the most important visual artists. These events tarnished the reputation of the Kunstakademie and additionally find the building damaged during the end of the war in 1945.

[64] Beuys brought the school to the forefront of the artistic scene with the famous Festus Fluxorum Fluxus, 1963, a borderline rebellious event associated with the Fluxus movement consisting of interdisciplinary artists.

[65] Claudia Mesch, *Joseph Beuys* (London: Reaktion Books, 2017), 7.

[66] Bueys, who had been Mataré's student in monumental sculpture, continued this legacy. Even today the school appoints professors who were once students at the Kunstakademie and whose renown have brought it to the forefront of artistic development, such as Andreas Gursky: this will be expanded on in a later chapter.

[67] A comment by publisher Lothar Schirmer. In Stefan Gronert, *The Düsseldorf School of Photography*, 7.

Figure 35. Joseph Beuys, I like America and America likes me, 1974, installation, photograph (from the M HKA museum for contemporary art 2020 installation)
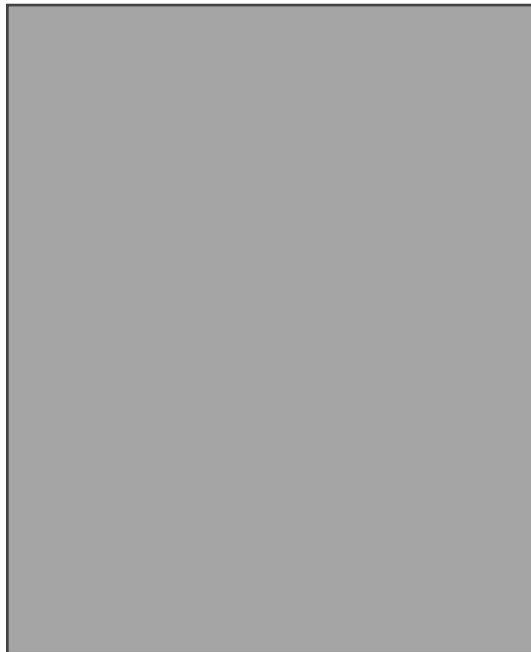
Figure 36. Franz Erhard Walther, Ohne Titel (4 works), 1962, watercolour on paper laid on cardboard.

As part of this long trajectory of success, in 1976 the photographer Bernd Becher was appointed "first professor of artistic photography at any German academy"[68] in the new School of Photography. With the assistance of his wife, the photographer Hilla Becher − who was unofficially co-leading the programme − Becher found himself taking on the formation of a new endeavour, the

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[68] Susanne Lange. *Bernd and Hilla Becher: Life and Work* (Cambridge, MA: MIT Press, 2007), 15.

addition of Photography to the growing list of artistic developments taking place in the Kunstakademie. This seems to have coincided with the culmination of a number of artistic movements in Germany and more widely in Europe that stemmed from recent historical events and social situations. Recovering from World War Two and with part of the country under Soviet occupation, the dividing, and censorship, in Germany[69] inspired the emergence of various artistic movements, many of which began in Düsseldorf. In the late 1950s a new Minimalism emerged in the city[70] that was independent of the one in America and "was in many cases stimulated by, but also in conflict with, Concrete Art and the European Zero avant-garde".[71] As a natural consequence, intertwined with Minimalism, Conceptual art emerged in the 1960s – the first documented exhibition to use the title "Konzeption" took place in Leverkusen in 1969 and featured, among many well-known artists, Bernd and Hilla Becher.[72]

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[69] Between 1949 and 1990 East Germany was under censorship, where all publication was controlled by the government. This was in fact taking place in both parts of Germany, but censorship also continued against East German art after the fall of the Berlin Wall in 1990 and the unification of the country. In 1990, during the amalgamation of the two Berlin art academies, many artists who had fled East Germany, among whom was Gerhard Richter, resigned as a protest against the immediate employment of their Eastern counterparts, their political beliefs, and their artistic style. See Eckhart J. Gillen, "The German Bilderstreit. The Inter-German Controversy about the Value of the East German Art", *Historisch tijdschrift Groniek, Kunst & Macht,* 203 (2014): 189. Therefore, schools in the West Germany created and represented the West German art in general, including the Kunstakademie Düsseldorf. See for example: Klaus Schrenk. *Upheavals: Manifestos, Manifestations: Conceptions in the Arts at the Beginning of the Sixties* (Berlin; Düsseldorf; Munich: DuMont Buchverlag, 1984).

[70] This movement evolved from the work and teachings of Beuys and Götz and in 1962 Franz Erhard Walther, student of Götz, was documented as the first to develop proto-Minimalist objects at the Kunstakademie, followed by other students of Beuys. Erik Verhagen, *Franz Erhard Walther Dialogues* (Madrid: Museo Nacional Centro de Arte Reina Sofía, 2017), 117.

[71] *Minimalism in Germany 1960s*, exhibition at the Daimler Contemporary, Berlin, Germany, (12 March – 30 May 2010), https://www.e-flux.com/announcements/37119/minimalism-germany-1960s/#:~:text=This%20German%20Minimalism%20was%20in,spectacular%20projects%20for%20public%20space. Also see: Renate Wiehager, *Minimalism in Germany: The Sixties* (Daimler Art Collection), (Ostfildern: Hatje Cantz; 2012).

[72] Rolf Wedewer, Konrad Fischer, *Konzeption--conception. Dokumentation einer heutigen Kunstrichtg.* [Documentation of a tendency in contemporary art]. (Hrsg. vom Städt. Museum Leverkusen. Schloss Morsbroich.) (Köln, Opladen: Westdeutscher Verl., 1969).

Figure 37. Otto Steinert, Luminogramm, 1952, gelatin silver print, 29.4 x 39.1 cm.

With these new forms of artistic expression and rapidly developing technology, photography began to have a stronger artistic presence and gradually became emancipated from other forms of representation. Through Minimalism and Conceptual art[73] there was a re-emergence of a "New Objectivity"[74] in Germany that played a central role in the development of Bernd and Hilla Becher's photography and which was passed down through their work and teaching.[75] Like the original emergence of New Objectivity in the 1920s – that had been a reaction to Expressionism, that had defined the arts after World War One − the reappearance of New Objectivity in the 1950s occurred during the social situation and the general atmosphere that prevailed in Germany after World War Two, countering existing movements such as Subjective photography. German photographer Otto

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[73] The new movements of the '50s and '60s, such as Minimalism and Conceptual art were at the time representative of the art scene, and even though they might have not initially represented the School's direction they certainly played a role in the re-emergence of the 'Neue Sachlichkeit' or New Objectivity [Trying to divert from general arts to photography --- New objectivity is approached only from the photographic component.]

[74] Gronert. *The Düsseldorf School of Photography*, 17.

[75] In a letter to his colleague Alfred H. Barr in 1929, art historian Gustav F. Hartlaub claims to have coined the term "New Objectivity" as a "label to the new realism bearing a socialist flavour", going against the general trend for Expressionism at the time. The movement began as a definition of a German style of painting, but continued to encompass the arts, literature, and architecture as a protest against the Expressionism of the Weimar period (1918-1933). It carried similar attributes to the English Arts and Crafts movement and promoted an objective, austere view of reality and an industrial society. It formed as an antidote to the earlier movements of Futurism and Dadaism which used Expressionism either as an escape from reality or to vent discontent. The movement found many supporters, especially in architecture, among which were the prolific architects Bruno Taut and Erich Mendelsohn, for its honest approach to construction and its aversion to excess. However, the movement's historical progression was not continuous. It essentially ended as the Nazis ascended to power and after World War Two it began to re-emerge in the work of Bauhaus artists such as Man Ray and Laszlo Moholy-Nagy, as well as photographers associated with the movement's ideology, e.g., August Sander.

Steinert's work during the 1950s defined this movement in photography,[76] in an opposite position to that of the Bechers. As a response to the war's aftermath, his work focused on everyday routine, through innovative and inventive methods. His photographs were the result of experimental techniques, depicting black-and-white abstract images. The work of Steinert and the other Subjective photographers aspired to delve into the human condition and withdraw from the outside world,[77] a way of working that was subsequently challenged by photographers who espoused an objective approach. The emergence of Subjectivity also comes as a reaction to the use of photography in the previous years under the Nazi regime, which not only halted the development of the original New Objectivity but instead used it as a means of promoting their ideas, limiting other interpretations, and constructing inaccurate representations of reality according to their specific agenda. [78] Otto Steinert's post-war work was a challenge to this preconception: he attempted to reinstate photography as fine art and as an expressive medium. His efforts in this received enough recognition for him to be appointed at a later date as a professor at the School of Photography in Essen, and he is perceived today as one of the most representative German photographers of Subjectivity in the 1950s-'60s.[79] However, his photographic method emerged at a time that was not yet receptive to this stylistic approach, since it was not acceptable as an expression of the post-war period, and due to its similarity to abstract painting, which was a current movement at the time, his work failed to achieve the recognition it deserved and deterred him from substantiating Subjectivity as a conducive movement.[80]

The creation of the Düsseldorf School of Photography was a response to the demand for a different view on the post-war situation, and to reflect the rapid artistic development of photography and its adoption by other artists such as Man Ray, the Kunstakademie expanded its art departments to include photography. Bernd and Hilla Becher were ideal candidates to take on this endeavour, having already created a distinct style of photography that went beyond simple photographic documentation, making use of nineteenth-century concepts with the technical capabilities of the twentieth century. In contrast to other photographers of the time, such as Otto Steinert, they chose to look at the past and retain its identifying elements photographically, instead of looking towards the future in an abstract

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[76] Three exhibitions between 1951 and 1958, under the name "Subjektive Fotografie" helped to establish the Subjective movement, which eventually became international with artists Takashi Kijima, Takeji Iwamiya, Aaron Siskind and others following in his footsteps. In Emma Lewis, *Isms: Understanding Photography*. (London: Bloomsbury Visual Arts, 2017). "Subjective photography" is also found under the name of "Fotoform movement", the post-war avant-garde photography that expressed an abstractive perception, which Steinert is credited in founding in 1949 together with other five German photographers Peter Keetman, Siegfried Lauterwasser, Wolfgang Reisewitz, Toni Schneiders and Ludwig Windstoßer. In Otto Steinert, Ute Eskildsen, and Museum Folkwang Essen, *Parisian Forms* (Göttingen: Steidl, 2008).

[77] C. J. Bucher, "International Federation of Photographic Art," *Camera*, 60, (1981): 355.

[78] Peter Fritzsche, *Life and Death in the Third Reich* (Cambridge, MA: Belknap Press of Harvard University Press, 2008), 42-44.

[79] Michael Bässler, et al. *Otto Steinert Und Schüler: Fotografie Und Ausbildung 1948 Bis 1978*. (Essen: Museum Folkwang, 1990).

[80] Gronert, *The Düsseldorf School of Photography*, 16.

and subjective way. This approach was well received in many countries, but received particular critical interest in Germany, based on the reception for their work and their participation in several documenta exhibitions from 1972 onwards in Kassel[81] and their exhibitions in United States and the United Kingdom, starting at the University of Southern California in January 1968[82] through to the show at the Institute of Contemporary Arts in London in 1974[83] and beyond.

The newly founded school was deeply linked to the earlier history of the Kunstakademie, but its immediate success was also due to the work and tutorship of its first professors. The first generation to emerge from the school eventually formed a strong group of artist photographers who have transformed photography up to the present day. [84] They became known as the Becher School,[85] a name coined during an exhibition that took place in 1988 with the title "Bernhard Becher's Students".[86] They all shared a common beginning, adopting Bernd and Hilla Becher's teachings and approach, their expression of New Objectivity and their relation to "German photography itself".[87] The majority of the students have continued to produce work of critical acclaim with an international reach that continues well into the twenty-first century and reaches beyond the limits of the photographic discipline. Each of these artists continued to grow and develop in their own distinct manner and time, building upon what is now part of the understanding of artistic photographic representation of the landscape and other types of photography. The effects of the Bechers' work still resonate through this new work even now, presenting a direct outcome of academic research, the consistent application of methodology and a clear outlook on the role of photography in the arts.

Bernd & Hilla Becher: learning how to see

Bernd and Hilla Becher's work is often linked to discussions of architecture concerning documentation, typological analysis, and the preservation of industrial architecture.[88] While the

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[81] *documenta 5* [exhibition catalogue] (Kassel: C. Bertelsmann Verlag, 1972).

[82] Susanne Lange. *Bernd and Hilla Becher: Life and Work* (Cambridge, MA: MIT Press, 2007), 65.

[83] Ibid. 21, 67.

[84] Comprised of Volker Dohne, Andreas Gursky, Candida Hofer, Axel Hutte, Tata Ronkholz, Thomas Ruff, Iris Salzmann, Thomas Struth, Angelika Wengler and Petra Wunderlich.

[85] They are often referred to as the "Düsseldorfers", not only for their affiliation to the institution, but also for the common aspects that characterise their work.

[86] In Cologne. See: Isabelle Graw, "Bernhard Becher's Students / Johnen + Schottle", *Flash Art*, 143 (November-December 1988), 123.

[87] Uta Grosenick and Thomas Seeling (eds.), *Photo Art: The New World of Photography* (London: Thames and Hudson, 2008), 485.

[88] Ian Wiblin, 'Looking for the Affect of History in the Photographic Work of Bernd and Hilla Becher', in *Camera Constructs: Photography, Architecture and the Modern City*, ed. Andrew Higgot and Timothy Wray (London: Ashgate Publishing, Ltd., 2012). Also, John Shannon Hendrix, Holm, Lorens, *Architecture and the Unconscious* (London: Routledge, 2017), 142. And in John Beck, 'Bunker Archaeology', in *Virilio Dictionary*, ed. John Armitage (Edinburgh: Edinburgh University Press, 2013).

Bechers clearly focused on the field of photography, several elements of their practice can be seen to transfer to architecture. Their methods and methodologies, their unwavering approach and their indisputable discernment provide a visual representation of architectural discourse on typology, functionalism, and formalism, among many other subjects. What stands out in this transference is that despite the depth of their practice and research, these references are presented, however, as a corroboration to investigations taking place in architecture and are rarely considered as architectural investigations from a different disciplinary approach with authority equal to those developing in the architecture discipline. The Bechers' contribution to architecture is manifold, but through their typological investigations alone, a more varied approach to the re-emergence of architectural typologies can be observed, one that comes from a long history of landscape representation, socio-political issues, and an academic approach to artistic photography.
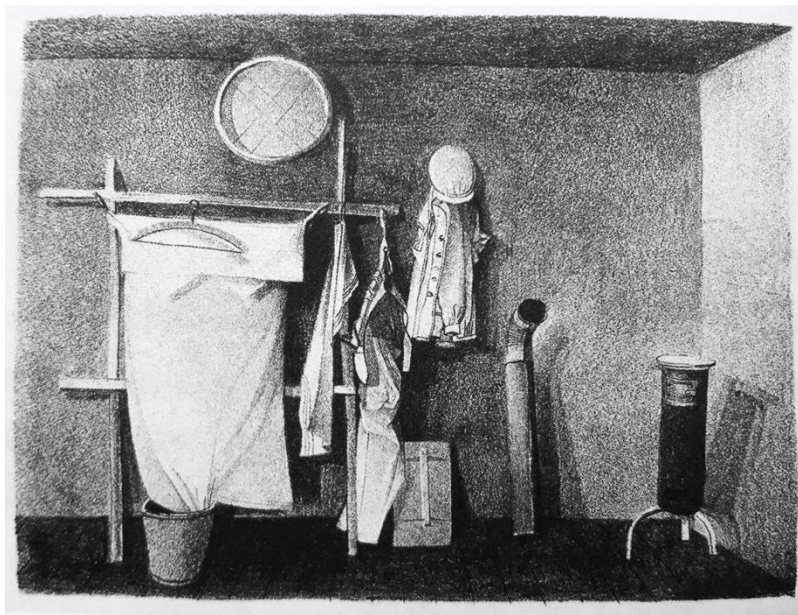
Figure 38. Bernd Becher, Bricklayer's Workshop, 1952 Lithograph, (in Susanne Lange, Bernd and Hilla Becher: Life and Work).

Figure 39. Bernd Becher, Eisenhardter Tielbau Mine, Eisern, Siegen District, 1955-56 Watercolour and pencil, (in Susanne Lange, Bernd and Hilla Becher: Life and Work).
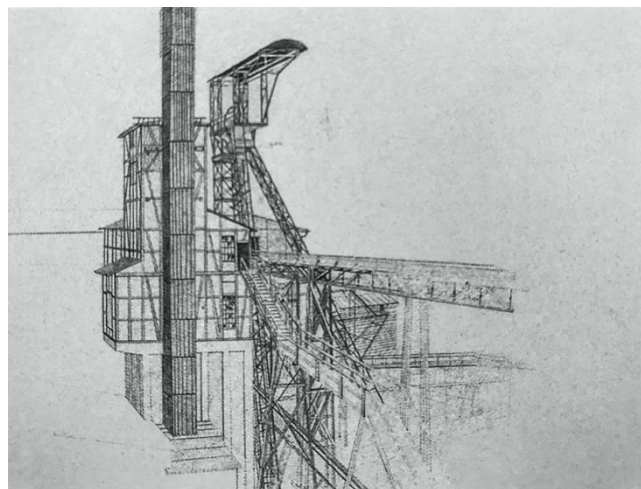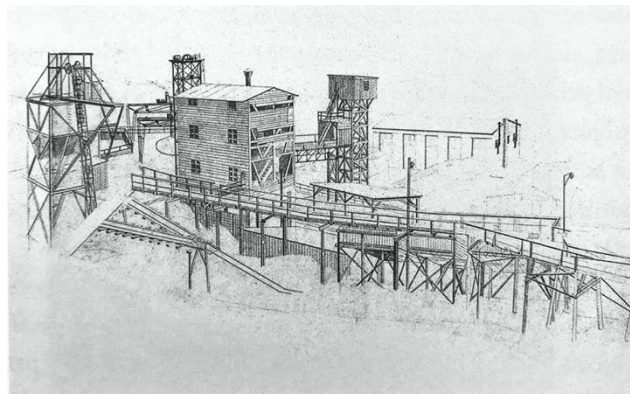
Figure 40. Bernd Becher, Eisenhardter Tielbau Mine, Eisern, Siegen District, 1955-56 Pencil, (in Susanne Lange, Bernd and Hilla Becher: Life and Work).

From early on in their careers, both Bernd and Hilla Becher showed a pronounced interest in architectural investigations through various means. Bernd Becher (1931-2007), who was born in Siegen, an industrial part of Germany with a long history of mining and steel production, learned drawing and painting from a young age.[89] He honed his appreciation for formal artistic traditions by working beside his father as a decorator, and exercised his artistic skills in drawing and painting, which he studied, showing a marked interest in drawing historical buildings. He studied graphic art, painting and typography, initially in 1953 under Karl Rossing at the Staatliche Akademie der Bildenden Künste in Stuttgart and four years later under Walter Breker in Düsseldorf. The main subject of his drawings was industrial buildings, that were part of both his background and of the area of Germany he grew up and lived in. When the area began to change after 1953, with old mines closing down, Becher became more vigilant in his documentation of these buildings as they fell into disuse. He realised that the speed with which the landscape was changing was too swift to follow with drawings and sketches, and so he was obliged to rely on the camera to take photos for his future reference. He used this approach to progress to the creation of photo collages of different parts of the building to create a whole, something which he abandoned after visiting the exhibition of Paul Citroen's Dadaist collages at the Düsseldorf Kunstverein in 1958, where he realised that the method he was developing had already been attempted and fully explored. This event meant that Becher subsequently used photography exclusively for documenting and embedding the subject in historical memory. Becher's development, from his interest in architecture, representation, drawing and eventually photography, is very similar to the way many architects' careers developed. Le Corbusier, for example, had similar concerns to those of Becher about the issues of time constraint and the documentation of architecture. In his early years, Le Corbusier employed sketching as a means of documentation, giving emphasis to the realistic representation of the subject, and later used photography to address similar concerns to those he had shown in his drawings, such as geometry, angle, and framing.[90] His relationship with his subject matter, the use of drawing and photography, is very similar to Bernd Becher's early development.[91] Later, they can both be seen to have questioned what the outcome of this practice could contribute to their investigations and eventually take their own different directions, but the concern for, and interest in, architectural space and the implementation of different mediums of representation in its investigation are elements that are important for both architect and photographer.

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[89] Lange, *Bernd and Hilla Becher: Life and Work*, 11-14.

[90] Andrej Piotrowski. "Le Corbusier and the Representational Function of Photography". In Higgot, Andrew, and Timothy Wray. *Camera Constructs: Architecture and the Modern City* (London: Ashgate, 2012).

[91] For a more detailed history of Le Corbusier and photography see: Nathalie Herschdorfer, Lada Umstatter, and Tim Benton. *Le Corbusier and the Power of Photography* (London: Thames & Hudson, 2013).
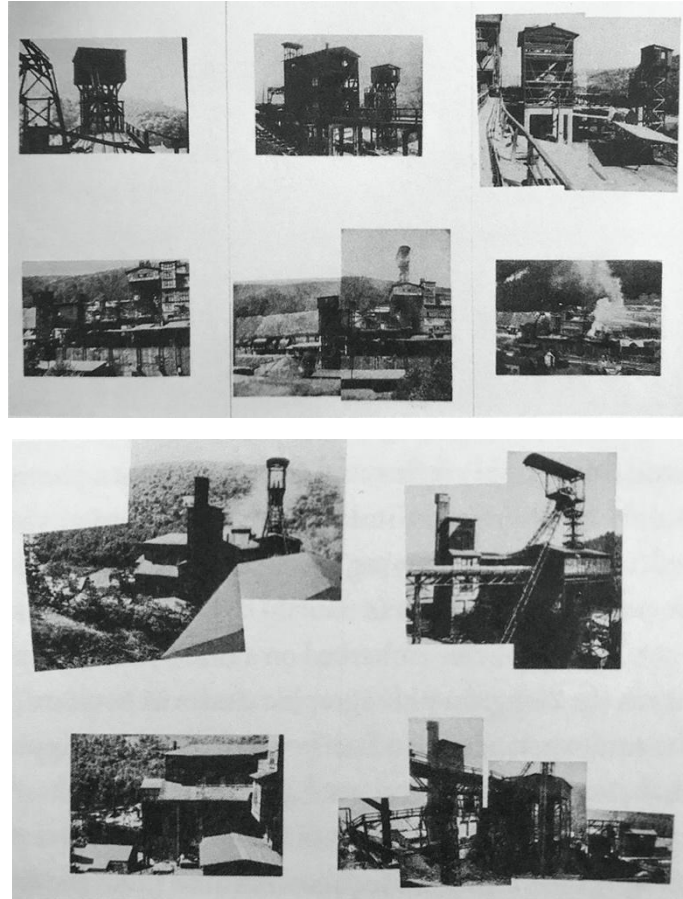
Figure 41. Bernd Becher, Eisenhardter Tielbau Mine, Eisern, Siegen District, 1955-57, Photo collages, (in Susanne Lange, Bernd and Hilla Becher: Life and Work).
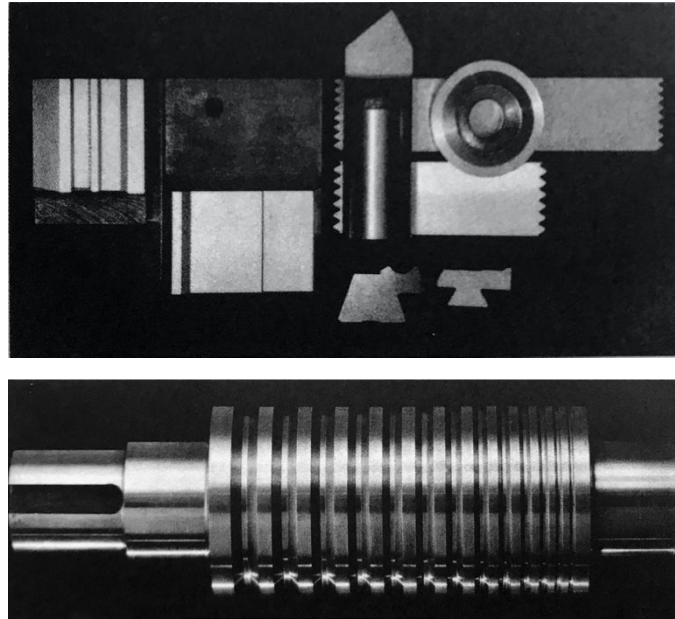
Figure 42. Hilla Becher, Study, early studio photographs, ca. 1960, (in Susanne Lange, Bernd and Hilla Becher: Life and Work).

On the other hand, Hilla Becher (1934-2015), born Hilla Wobeser, developed first and foremost as a photographer before taking an interest in architecture. Born in Potsdam, Wobeser took to photography from a very early age, influenced by her uncle, a photographer, and her mother, who was also trained as a photographer.[92] Wobeser worked for three years from 1951 as an apprentice at the Eichgrün photographic studio in Potsdam, where she was educated in strict formal principles and documented various buildings and objects: during this time, she also developed an appreciation for industrial locations. In 1957 she moved to Düsseldorf, where she met Bernd Becher, and in 1958 enrolled at the Kunstakademie under Walter Breker, studying graphic art and printing alongside Becher. In 1961 both Becher and Wobeser graduated from the academy and married, inaugurating a long period of collaboration. In the years that followed, the couple developed their techniques and methodologies, travelling around Germany, Europe and America documenting industrial buildings that were endangered by impending modernisation. It could be said that the contribution of Hilla Becher to the couple's work was her longer experience of photography: in an interview with historian Thomas Weaver, Hilla recalls helping Bernd to "develop his knowledge of the basics of the darkroom", yet he was the one to bring the obsession with the subject and perspective.[93] In the end, the work they produced together seems to have been the result of the approach they held in common – their individual roles were indistinguishable, and as such the work is always considered to be the

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[92] Lange, *Bernd and Hilla Becher: Life and Work*, 14-16.

[93] Hilla Becher and Thomas Weaver. "Hilla Becher in Conversation with Thomas Weaver." *AA Files*, 66 (2013): 17–36, 24. She mentions towards the end how *Industrial Landscapes* reflects an approach that is closer to Hilla's mode of photography, incorporating more context in the depiction of their subject.

product of both the Bechers.

These early years were formative in the Bechers' eventual development. Their experiences during World War Two and afterwards, the result this politically tumultuous time had on their surroundings and their access to photographic equipment presented their choice of subject matter and their approach to it as almost unavoidable. Their exposure to established and emerging artists was also instrumental, the most notable being August Sander and the brothers Louis-Auguste and Auguste-Rosalie Bisson,[94] whose influence can be found in several facets of the Bechers' work. So, while their interest in photographing industrial sites began as a means of documenting and preserving these disappearing landscapes, it was soon transformed into an artistic discourse. Inasmuch as Sander's work cannot be considered merely as a documentary archive but rather as the precursor to art movements of the 1940s and '50s, the Bechers' work is pioneering in its own right.

Typologies through the photograph

Ultimately, the Bechers' work can be divided into that which is "seen", and the behind-the-scenes preparation which led to the production of the final photograph. Their photographs are defined by their industrial subject, their consistency in presenting these in a flat way, on the level of the horizon, as black-and-white prints on a tableau scale, and their arrangement of these in groups and families, the result of their distinctive typological exercises. Their methodological structure can be split into three parts: the creation of "relationships" between either forms or building types, which comprises their fundamental architectural typology; the serialisation of the form of a singular building by capturing as many of its elevations as possible to document it, and finally the identification of the architecture either through photographing it or the vigorous background research and collection of documentation on their projects. To reach this outcome, the photographers travelled around Germany and other countries for extended lengths of time, carried out a range of archival research and site-work and produced drawings of their own, and of course, were dependent on the technical equipment they had access to at the time.[95]

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[94] Ibid., 25.

[95] The specific equipment they used set its own parameters for the system the Bechers followed and the final outcome that was produced. In Lange's research it is mentioned that the main equipment used was always a large format camera, initially a wooden plate camera, later moving to a Plaubel Peco 13x18cm camera that allowed for various types of lenses and filters (normal, zoom, or wide-angle), the film preferred being Agfa 13x18cm with very low sensitivity. Additionally, they used Polaroids and 35mms for their preliminary work. As a result of this equipment their choice of black-and-white photography is also due to the fact that colour photography in their early years still did not have the quality and durability to produce the sharp and clean results they intended, while later on it was adopted as a design choice despite the improvements in this category of photography. Furthermore, for their prints they chose paper such as 30x40cm Agfa Record Rapid for

The use of photography for documentation purposes was seen for the first time in Paris in 1852, through Charles Marville's documentary project. His photographic work was one of the earliest forms of a "typological approach to classification",[96] as described by Eve Blau: "In the repetitive treatment of the subject and multiplication of images a cumulative picture of the urban spaces of Old Paris emerges and a typology is established".[97] From that date, the growing development of industry employed photography for promotional purposes to highlight industrial and technological advancements such as the rapidly expanding railway.[98] "Whatever he photographed, the industrial photographer was obliged, as perhaps in no other area of photography, to observe strict guidelines: the photo should be fine-grained and the tonal values of the entire image balanced, as far as possible, everything should be in focus throughout and none of the objects portrayed should be at all blurred! These four elements became a kind of international credo for international photographers".[99]

Figure 43. Charles Marville, Rue Saint Victor, vers la place Maubert. Paris Ve,1866, 2017 photograph restored from a negative, 27,5 x 30,9 cm.

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compiling their shots as tableaus and 50x60cm for their individual photographs, rotating them according to the subject in landscape or portrait.

[96] Lange. *Bernd and Hilla Becher: Life and Work*, p.22

[97] Eve Blau. "Patterns of Fact: Photography and the Transformation of the Early Industrial City" in *Architecture and its Image: Four Centuries of Architectural Representation: Works from the Collection of the Canadian Centre for Architecture*. (Montreal: Canadian Centre for Architecture, 1989), 36-57.

[98] Jim Shaughnessy, Kevin P. Keefe, Wendy Burton, and Jeffrey T. Brouws. *Jim Shaughnessy: Essential Witness: Sixty Years of Railroad Photography* (New York: Thames & Hudson, 2017).

[99] Urs Stahel. "Industriephotographie-Inszenierte Sachlichkeit" in Wolfensberger, Giorgio J. *Industriebild: Der Wirtschaftsraum Ostschweiz in Fotografien Von 1870 Bis Heute*. (Zürich: Werd Verlag, 1994), 297.

Figure 44. Charles Marville, Place Maubert, du marché des Carmes. Paris Ve, 1866, 2017 photograph restored from a negative, 37.1 x 22.8 cm.
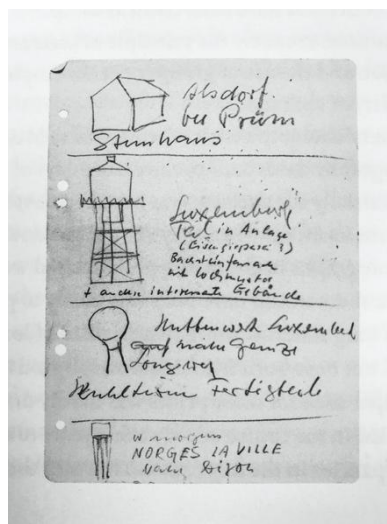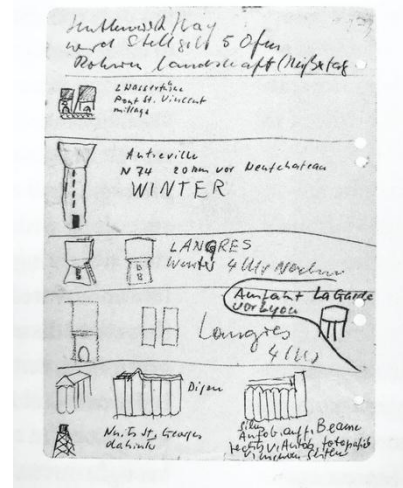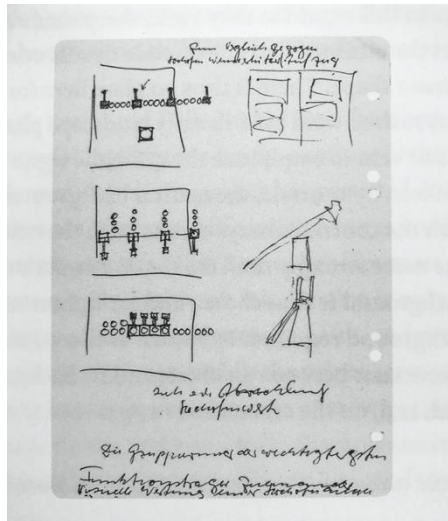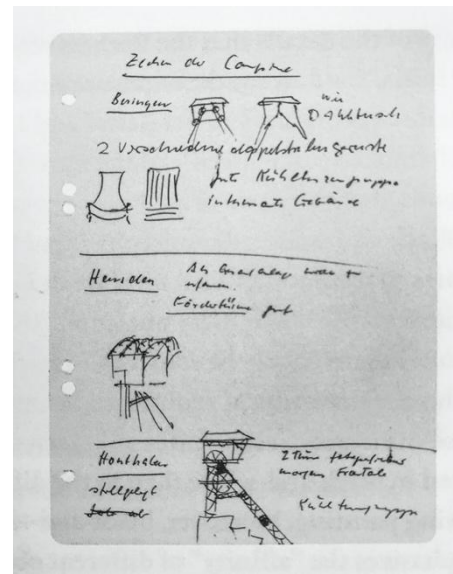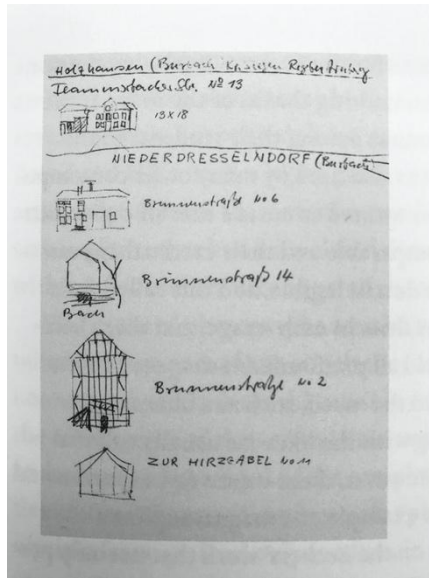
Figure 45. Bernd and Hilla Becher, Working sketches, ca 1970s, (in Susanne Lange, Bernd and Hilla Becher: Life and Work).

Bernd and Hilla Becher followed these same guidelines of industrial photography, but in this case to showcase the old and the disappearing. They remained true to the tradition of accurately portraying the subject and applied the principles of New Objectivity[100] – of not affixing to the subject any further opinion or identity of their own. Using neutral backgrounds, photographing under an overcast sky to avoid shadows and high contrasts, they brought the old industry to the forefront in a pragmatic way.[101] The material they collected throughout their careers consisted of industrial architectural engineering ranging from the 1870s to 1950s, creating a photographic documentation that represented the great range and development that had taken place between these years.[102] This is perhaps one of the most concise, detailed and representative documentation of the industrial architecture of that era in Europe and North America, making it an ideal reference source on account of its comprehensiveness and objectiveness. The photographs are only part of an extensive archive of drawings, plans, documents, and maps[103] that goes deeper into the history and identity of these buildings than photographs alone ever could.[104] The process of gathering this material[105] reflects the Bechers' incredibly organised and dedicated personalities, and was a practice that naturally resulted in a systematic development of thematic categories or typologies. This emerged from their thematic selection of industrial buildings and the consistent way in which they were photographed, allowing the final images produced to be comparable to each other.

This contribution of their research and practice to architecture was at the time a contribution to acknowledging and presenting a form of architecture that was otherwise overlooked. It resonates with the work of architect Walter Gropius and the early 1910s Modernist movement: admiring the honesty and simplicity of this type of construction, the Modernists dedicated their work to "preserving" these elements through their design work, countering the architectural reform advocated at the time. In 1913 Gropius published an article in the Deutscher Werkbund's yearbook, *Die Entwicklung moderner Industriebauten* (Trends in Modern Industrial Building), with a series of

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[100] Gronert, *The Düsseldorf School of Photography*, 17.

[101] This was counter to the Constructivists' approach, such as Alexander Rodchenko and El Lissitzky: they worked with similar subjects at the time, but with an emphasis on sensationalism.

[102] Lange. *Bernd and Hilla Becher: Life and Work*, 25

[103] Since their subjects didn't appear frequently in the literature at the time, the couple would often perform on-site research, documenting and compiling information, thus creating a new database for the industrial architecture that they visited. This informational background supported the objects that were later photographed, giving them their identity and further, "succeeded in taking a step closer toward ensuring the autonomy of the photographic image". From a conversation between the author and Bernd and Hilla Becher on September 25, 1996, in Lange, *Bernd and Hilla Becher: Life and Work*, 30.

[104] The acknowledgment of the documentation presents an interesting view of their work, since their photographs are presented as "Anonymous" sculptures or architecture. this shows a multilayered project that provides different meanings to the viewer depending on how they "view" the material, whether the photographs alone or as a part of more extensive research.

[105] The particular prerequisites their photography required e.g., a high vantage point, overcast skies and accessibility were something else they had to resolve through in advance preparations and during their many site visits, by themselves or alongside the people working at the sites.

illustrations of industrial buildings which he found commendable.[106] Gropius' photographs of factories and silos were part of his archival research and constitute one of the first instances where the photographs of such buildings were part of a public architectural discourse.[107] This use of photographs in Gropius' presentation signified one of the earliest critical discussions on architecture through the use of photographs, adding to the conversation an additional element of photographic style and technique.[108] Therefore, the ground for considering photographic representation as part of an architectural discussion was already established, allowing the further consideration of architectural analysis through photography which leads to the "reading" of the Bechers' work not as an archival documentation but as the development of a typological approach to architecture.

Their monograph *Anonyme Skulpturen* (1970)[109] represents this methodological approach of "reading" architecture through a series of different types of categories. In this publication their photographs are organised by type, such as silos, water-towers, blast furnaces, gas tanks etc. and are presented in groups so that their similarities and differences can become apparent. The architecture here becomes abstracted from its identity and is represented solely by its form and function − hence the title of the book, *Anonyme* ("anonymous"). This classification finds an anthropological precedent in the work of August Sander and his project *People of the 20th Century*, for which he photographed German citizens and organised them by their occupation and social class. In a reverential depiction of their affiliation, in 2014 Hilla Becher curated the exhibition 'August Sander / Bernd and Hilla Becher: A Dialogue'[110] in New York. In the exhibition she interchanged the methods of display by presenting Sander's work in grids and her own in sequences, therefore creating a typological discussion between two of the most representative artists of the genre. But the Bechers did not consider their work as art. On the contrary they saw it as a type of science, as Hilla mentions in 2012: "we also used the methods of natural history books, like comparing things, having the same species in different versions".[111] This aligned with the approach of other photographers of the New Objectivity movement, such as Karl Blossfeldt and Albert Renger-Patzch, who used the photographic medium to document and archive objects in a scientific manner. Moreover, Renger-Patzch believed that through this photographic method he could represent the "essence of the object", depicting its true nature and not recreating an

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[106] Lange. *Bernd and Hilla Becher: Life and Work*, 26.

[107] Catalina Mejía Moreno. "The 'Corporeality' of the Image in Walter Gropius' Monumentale Kunst Und Industriebau Lecture," *Intermédialités,* 24–25 (December 7, 2015). https://doi.org/10.7202/1034165ar.

[108] Mejía Moreno mentions in her paper the development from print photography to the projected image, its critical reception was positive, based upon its effectiveness, functionality and ability to simulate or deceive. As a result, Gropius' work in this presentation is considered for its "corporeality" of the image, a critical review of photographic representation as part of architectural discourse.

[109] Bernd Becher and Hilla Becher. *Anonyme Skulpturen, Eine Typologie Technischer Bauten* (Düsseldorf: Art-Press, 1970).

[110] Bruce Silverstein in collaboration with Sonnabend Gallery, "August Sander / Bernd and Hilla Becher: A Dialogue," The New York Times, May 23, 2014, sec. C.

[111] ASX.TV: Paris Photo. "Interview with Hilla Becher." France, 2012. *American Suburbx.* http://www.americansuburbx.com/2012/07/asx-tv-paris-photo-interview-with-hilla-becher-2012.html.

artistic vision.[112]

The Bechers studied the forms of these industrial objects and categorised them into "species", suggesting an eidonomic (the morphological study of biology) approach, also applying scientific procedures of taxonomy by observing, collecting, and classifying them in order to determine the design that informed these architectural forms. Their approach to architecture can be considered in this sense an objectifying one, looking at buildings as things that hold certain meanings only when further investigated. However, it is far from superficial, and their methodology reflects Heidegger's phenomenological views on objects as *Vorhandenheit* and *Zuhandenheit* [113] The first refers to the way their work is presented through their photographs, recreating the definition of their subjects objectively through their observation and appreciation of their uniqueness, outside of disorienting context, while the second to the constructed relationships they created by curating them in groups and thus identifying them anew through their previous "de-worlded" [114] reading. They present a rigorous and all-encompassing understanding of their subject (always remaining true to their objectivity) by shifting their perception and allowing for new readings through their practice of seeing, therefore revealing questions on the subject versus its representation. It can be defined as a form of metonymy, where "an attribute of a thing [is] used to refer to the thing itself", and in the photography of architecture, in particular, this emerges in the form of appearance.[115] For, through a photograph, only one "aspect" of the building is captured, the visible, and this in turn is represented in a very specific way. In the Bechers' case, the systematic methods of photography applied result in a consistently similar visual effect, turning the buildings into abstractions of their forms alone.

The grouping of photographs also appears to adhere to another theory, that of hermeneutics and its link to the original theory concerning typology. Manfred Lurker (1928-1990), a scholar of semantics and semiotics, worked on the understanding and categorisation of works of art through several handbooks and dictionaries.[116] In his work he explains that typological classification is not bound by rules: on the contrary, it is the creator's, in this case the artist's, judgement that creates portrayals that convey a certain understanding. While Bernd and Hilla Becher systematically identified categories, the way they organised them into groups was based on their personal

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[112] Maria M. Hambourg, Gilman Paper Company, & Metropolitan Museum of Art. *The Waking Dream: Photography's First Century: Selections from the Gilman Paper Company Collection.* (New York: Metropolitan Museum of Art, 1993), 356.

[113] *Vorhandenheit* (present-at-hand) stands for a scientific approach to observing the subject, forgoing its other qualities of identity and history, elements that form its *Dasein* (being), allowing its theorisation unconstrained by its past. On the other hand, *Zuhandenheit* (readiness-to-hand) involves a more practical view of the subject concerning its physicality, temporality and flaws, attributes that make it part of something. Weinberger, David. "Three Types of 'Vorhandenheit',"*Research in Phenomenology* 10 (1980): 235-50.

[114] Term used in S.J McGrath, *The Early Heidegger and Medieval Philosophy: Phenomenology for the Godforsaken* (Washington, D.C.: Catholic University of America Press, 2006), 72.

[115] Claire Zimmerman. *Photographic Architecture in the Twentieth Century* (Minneapolis, MN: University of Minnesota Press, 2014), 143.

[116] Manfred Lurker. *Wörterbuch der Symbolik,* (Stuttgart: Alfred Kröner Verlag 1991), 717.

understanding and aesthetics, creating a language with a vocabulary of form, function, and structure. The selection of the photographs was based on their clear depiction of these elements and their relationship to the group. In their sets the successive series of photographs from multiple perspectives described the overall form and identity of the object, whereas in their typological groups the objects were treated as representations of a formal language. For this reason, in the groups they used photographs of frontal shots, which had a more graphic structure and a less three-dimensional presence.
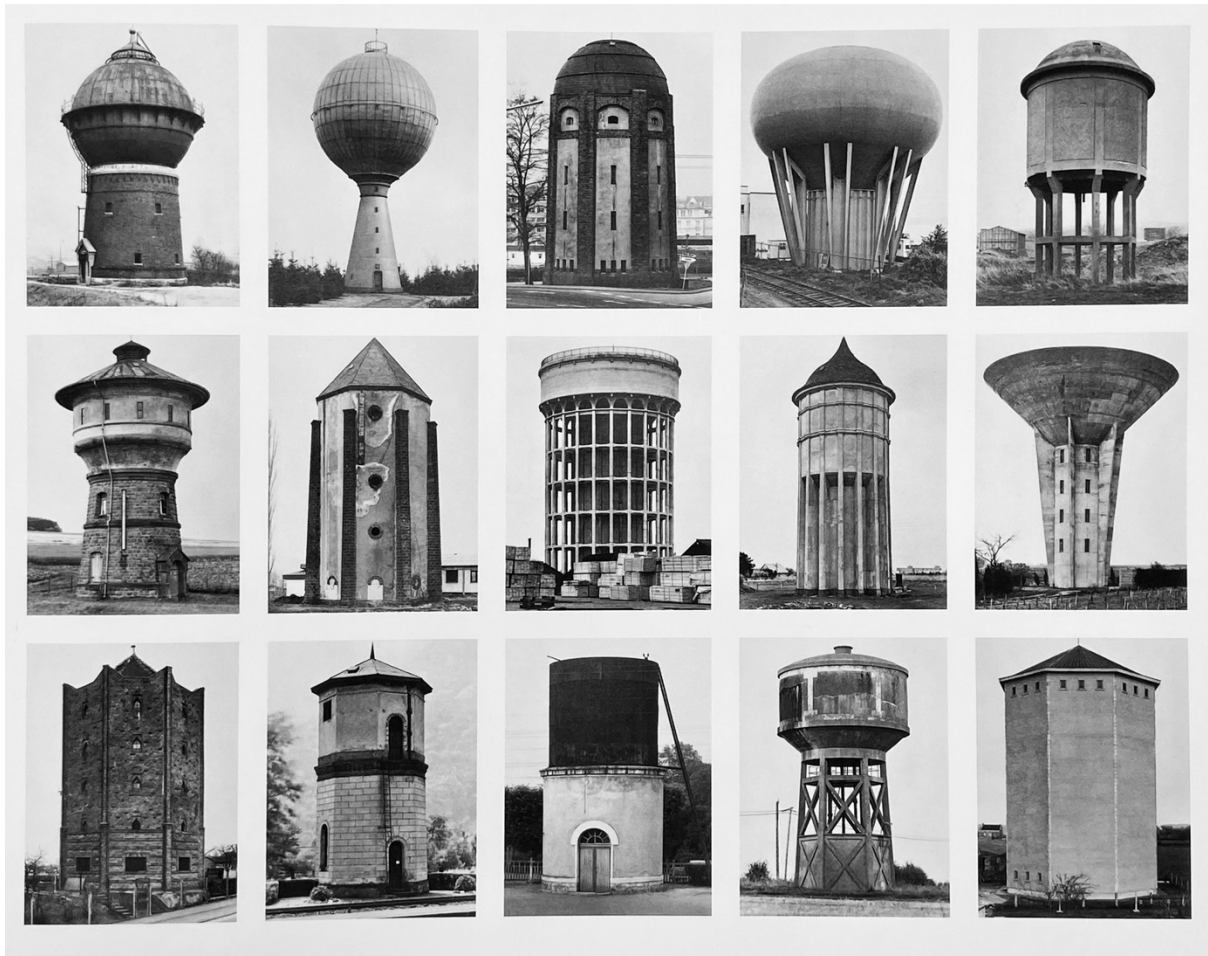
Figure 46. Bernd and Hilla Becher, Water Towers Image IV from the series Typologies, 2004.
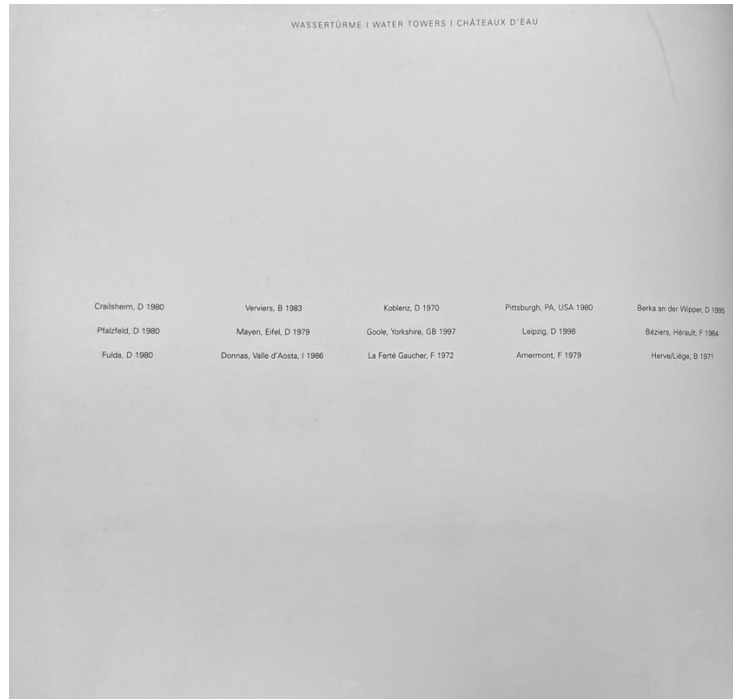
Figure 47. Opposite page with titles and years of individual photographs.

This subjective selection was minimised to the greatest extent by establishing rules that systematised the process. The various types of objects define the way they are depicted and therefore the views by which they are represented in the typological groups. For the water towers, cooling towers, gasometers and other edifices, which could be separated from the rest of the buildings and had a cylindrical geometry, one frontal shot would suffice to represent them. For other more complex structures, such as the blast furnaces or winding towers, the Bechers created a system where they would either use a set of perimetric views or they would break down the object into smaller parts. As published documentations that exist today, it is evident from their first book, *Anonymous Sculptures*, to their most recent ones[117] that the Bechers developed their system to become second nature in the selection and organisation of images that portrayed the "ideal-typical".[118]

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[117] Bernd and Hilla Becher. *Grain Elevators* (Cambridge, MA: MIT Press, 2006), and *Cooling Towers* (Cambridge, MA: MIT Press, 2006), were the last publications by the couple.

[118] Bernd and Hilla Becher commented on their development and the elements they were looking for in a photograph to define 'type' in an interview with Bernd and Hilla Becher. In Michael Kohler, "Die Gegenthese Zur 'Guten Form.' Schwer Zugangliche Bildmotive: Bernd Und Hilla Bechers 'Typologien Industrieller Bauten' in Dusseldorf'," (Frankfurter Rundschau, 2003), 15. http://www.fr.de/kultur/die-gegenthese-zur-guten-form-a-1205398.

Figure 48. Bernd and Hilla Becher, Coal Bunker: Zeche Hannibal, Bochum, D. 1973, exh.2012 eight framed gelatin silver prints, (Sonnabend gallery).

Despite their self-proclamation as non-artists, however, their work was considered part of the German conceptual art of the early 1970s.[119] Their persistence and consideration in retaining an objective representation of the subject and their photographic approaches to achieve this were choices that can be deemed artistic practices in their own right. Their work is closely linked to the Kunstakademie's history of landscape painting and the stylistic approaches of the Romantics, and later the Realists. It is quite clear in their *Industrial Landscapes* (2002) and their connection to the Ruhr region. As their sites expanded to cover different regions and countries, so did the narrative aspect of their work, in terms of its specificity. Despite utilising very objective methods and means of presentation, their work manages to convey situations and relationships that identify the peculiarity of these industrial landscapes. In Charleroi-Montignies (Belgium) the mines are situated among other auxiliary buildings, and these among houses, creating their own arrangement of an industrial town, where the mines are the dominating architecture. In this reading of the images the viewer can see the immediate effects the industry had on the area and its relationship with the local community. Like the paintings mentioned above, these photographs depict the landscape of the industrial era: "The main aim of our work is to show that the forms of our time are technical forms, although they did not

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[119] Gerald Schröde. "Positionings. On the Reception of Bernd and Hilla Becher's Photographic Oeuvre in the Federal Republic of Germany 1965-1990." In *Der Rote Bulli. Stephen Shore and the New Düsseldorf Photography*, edited by Werner Lippert, Christoph Schaden, and Stephen Shore (Düsseldorf: NRW-Forum, 2010).

develop from formal considerations. Just as medieval thought is manifested in the gothic cathedral, our era is revealed in technical buildings and apparatuses."[120]
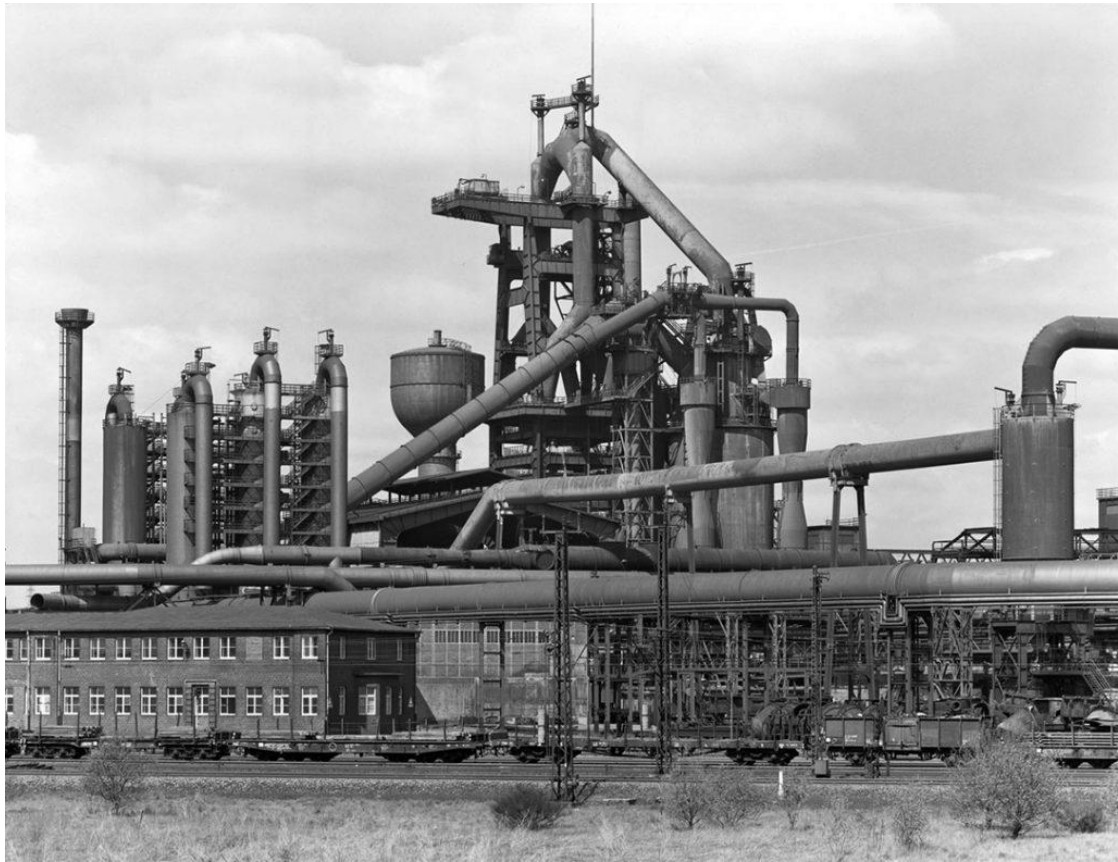
Figure 49. Bernd and Hilla Becher, Charleroi-Montignies, Belgium, Gelatin-silver print, 50 x 60 cm, 1971, (in Bernd and Hilla Becher, Industrial Landscapes, 2002).

Through their representation of architectural landscapes there are questions that emerge on the architecture of form, function, and the results of industrialisation, as well as the repercussion of the rapid changes to the landscape. They dismiss its architectural association, creating a controversy about what they define as architecture. In an interview, Bernd Becher stated: "It's not a case of photographing everything in the world, but of proving that there is a form of architecture that consists in essence of apparatus, that has nothing to do with design, and nothing to do with architecture either".[121] In this way, architecture is transposed to an "object". For the modernists, architecture was associated with function, production and the essential, a creative design that rejected the historical and was linked to the industrial and technological advancements of the modern era. They manipulated

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[120] From an interview with Bernd and Hilla Becher in 2005, quoted in: "Bernd and Hilla Becher," *Domus* [online] (26 November 2011) https://www.domusweb.it/en/news/2011/11/26/bernd-and-hilla-becher.html (Accessed, May 5th, 2018)

[121] From an interview with Bernd and Hilla Becher, in Ulf Erdmann Ziegler, "The Bechers' Industrial Lexicon", *Art in America* (June 2002), 140.

architecture as a "prototype" that could be adapted to fulfil its purpose (i.e., Le Corbusier's Dom-Ino house) and this becomes especially clear in the Bechers' typological comparisons. The language created here is based on one basic formal commonality that changes with place and time to fit the technical requirements but also becomes subject to local factors (material, techniques, cultural and social aspects, etc.). This type of architecture emerges from a systematic design very much like the methodology of the Bechers or that of the Modernists, without premeditation, but for its single purpose of function. Complementary to Modernist architecture, the architecture of the Bechers is also an expression of Minimalism. It was in fact a concept that the Modernists embraced as a result of their renouncing of ornamentation, but for the Bechers Minimalism became an expression. They were naturally exposed to the Minimalist movement that developed in the Kunstakademie, and especially to the influence of Joseph Beuys, who was studying at the school at the time that the Bechers were students there. Their presentation of their work is both a visual and methodological expression of Minimalism. If the set-up of the subject is considered, it is situated and expanded to the extent of the frame, excluding anything and everything that could possibly detract from its monumental presence. Additionally, in order to achieve this effect, the Bechers "processed" the images through their laboratory work, thus making the emphasised subject part of their process and their objective. These enquiries place their work in the centre of architectural and typological discourse. With their monograph *Typologies of Industrial Buildings*,[122] that officially addressed their methodology and approach to the subject, their typological investigation placed them even more centrally in such discussions.

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[122] Bernd Becher and Hilla Becher. *Typologies* [1977] (Cambridge, MA: MIT Press, 2004).
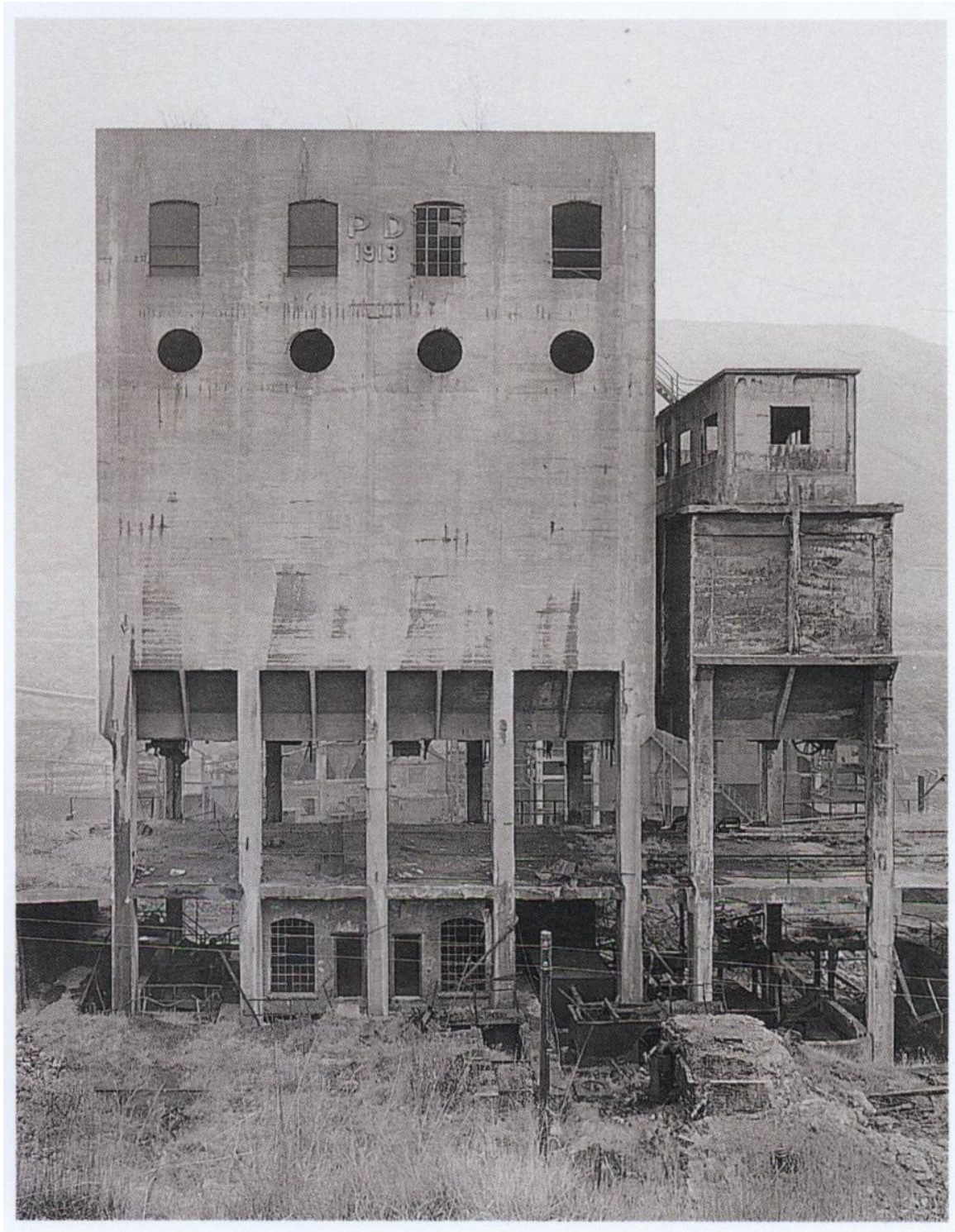
Figure 50. Bernd and Hilla Becher, Bargoed Coking Plant in South Wales, 1966, 40 x 30 cm, (part of a series of four Coal bunkers, in Hilla Becher and Thomas Weaver, 'Hilla Becher in Conversation with Thomas Weaver', AA Files, 2013).

In this typological collection, buildings from different countries and years are brought together to create juxtapositions and enable various of interpretations of form and function to be read. In one page, in particular, four coal bunkers are placed in a square grid with visible similarities and

differences. What is quite striking, however, is the arrangement of forms, whether that includes small elements such as windows and stairs or the larger forms of the buildings, such as their massive rectangular spaces and their supportive structures. One of them, in fact, the *Bargoed Coking Plant in South Wales* (1966) seems eerily familiar to Aldo Rossi's painting of *Città con Architetture e Monumenti*, (1972). The presentation of these coal bunkers gives the impression of a composition of separate smaller and individual elements to create a whole, a building type that, depending on the composition, can achieve a number of different forms. Rossi composes his paintings in a similar fashion by repeating and alternating between specific elements, recreating variations of the same subject. In one case the Bechers present a landscape of industrial architecture, and in the other Rossi presents an urban landscape which references industrialisation. In this painting, Rossi seems to recreate the Bargoed coking plant, down to the small adjoining structure on its right. The repeated window forms and elevated rectangular forms on stilts can also be seen in his other drawings. The representation continues this similarity, emulating the deadpan, flat, straight elevation characteristic of the Bechers' photographs.

It transpires that typology here is used as a means of understanding, or, in this particular case, of the Bechers', as a "way of seeing". It is not merely a method of curating, of exhibiting, or cataloguing, but a form of dialogue and investigation. The Bechers introduced a distinct way of presenting architectural typologies, which had never before been witnessed in architectural practice in such a vigorous and structured way. The Bechers' typology is seen not only in the taxonomy of their buildings but in their methodology as a whole, including the large-scale image, the black-and-white neutrality, the deadpan, the overall documentation of each and every part of the subject, along with everything else that defined their work. They included "unsophisticated objects" within their definition of architecture, using typology as a means of educating by "objects" and bringing them to the fore as buildings of enduring architectural value through their exhibition as works of art. Through art, photography and a rigorous methodology, the typological collections of industrial architecture can be considered as a distinct architectural typology that emerged in Germany in the 1970s within the realm of an artistic photographic discipline.

Conclusion: Testing "ways of seeing" in Typology

Through the juxtaposition of these two works, the photographic typologies and the paintings, there is a direct reference to the historical background in which these works emerged. The rapid developments in construction, technology, and the environment as a whole are clearly evident in the direction of design choices and subject matter. At the same time two distinct responses to the general post-war climate − several years after the war but in both cases with first-person accounts and experiences of the war and its effects − are presented. One is propelled by a limited sense of nostalgia that aims to

preserve history and identity. The work of the Bechers is not sentimental in the manner of reminiscence but expresses a struggle to document a turning point in history, an overlooked architecture of the previous era that was becoming obsolete. On the other hand, Rossi's work responds to these events through an attempt to understand the consequences, but also the learnings from it. Through his writing, and paintings, and also his architecture, he investigates the continuities of history. Again, a different kind of nostalgia is witnessed in his work, one that resonates with Surrealist art and the struggle to preserve that which is gradually being lost to time. Through this layered analysis of their work lies a fundamental need to comprehend the changing architectural landscape. It is this search for knowledge that tests "ways of seeing", through either photographic or architectural investigations. Using visual and critical mediums architecture is reproduced and represented in ways that enable its analysis. In part, some of these investigations resulted in what we now regard as the third emergence of architectural typology, and in part in what is considered to be some of the most distinctive photographic work of the 1970s German art scene. However, together these individual investigations can also be seen as one broader typological investigation that spans disciplines and which in and of itself is not only about typology but also about an intrinsic search for architectural identity.

The ordinary and the vernacular

In the 1960s and '70s "the vernacular" acquired a central role in development of both architecture and photography. Etymologically, "the vernacular" has generally referred to something that is local, common, or ordinary, while epistemologically it was considered to be in contrast to Modernism.[1] In a changing landscape, that was increasingly becoming altered by human intervention through industrial development and the culture of mass-production and consumption, these notions inspired architects and artists to explore and reframe them within their existing conditions. In this context, the vernacular became anything but ordinary; it was used as a means to re-assess, critique, and contest established notions. In both architecture and photography, through contradictory and polemical positions, the vernacular was employed as an opportunity to question established perceptions and propose a new appreciation for that which was no longer important to "seeing". In architecture, manifestos, seminal theoretical works, and publications engaged with the vernacular, using photography as the basic means of its representation and critique. In projects such as "Architecture without Architects" and "Learning from Las Vegas", the vernacular grows as an application and definition through the practice of photography, developing from a kind of subject matter to an approach of study, bridging other disciplines, practices, and schools of knowledge. Simultaneously, art photography explored the vernacular through the everyday and the ordinary, an exploration that had a decisive influence on what was ensuing in architecture, bringing to the forefront artists such as Stephen Shore and Ed Ruscha. Through interactions and collaborations between these two disciplines, the ordinary becomes a lens through which architecture re-evaluated its education and terms of references. Photography's role in approaching this subject presents a fresh view and new value in exploring surroundings as it develops "ways of seeing" to methodologically question society, its values, and life itself. Whatever parts of it seeped through to architecture was enough to question ideas of landscape, Modernism, and architecture. The following chapter explores these two disciplinary approaches of the vernacular and the ordinary, the "ways of seeing" they developed, and considers the boundaries between them as they investigate this subject that can be wide in scope yet, equally, particular.

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[1] A collection of interdisciplinary essays on the subject of "the vernacular" in architecture, and the necessity for an updated definition, may be found in Marcel Vellinga, Asquith, Lindsay, *Vernacular Architecture in the 21st Century: Theory, Education and Practice*. (Abingdon: Taylor & Francis, 2006). Its opposition to Modernism is somewhat related to its connotations to "traditionalism" (i.e., in Hassan Fathy's challenge to Modernism), amongst other similar concepts that contradicted Modernist notions.

Questioning Modernism

Figure 51. Installation view of the exhibition, "Are Clothes Modern?", Photograph by Soichi Sunami. The Museum of Modern Art Archives, New York, IN269.6, 1944.

The tendency of architecture to search for alternative means of investigation and other ways of expressing ideas is clearly found in a couple of influential and radical projects by the architect Bernard Rudofsky that preceded "Learning from Las Vegas". Using every means at his disposal, Rudofsky produced seminal work on architecture by questioning its established understanding, and by proposing a more open consideration of its practice. Throughout his work and collaborations photography is seen to play a very central role, not only in depicting his findings but in its use as a critical medium to question and explore. This gradually developed during a time of socio-political and cultural fluctuation between different iterations of Modernism between Europe and the United States,[2] with Moravian-born Rudofsky moving to New York in search for freedom and opportunities for architectural critique.

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[2] American Modernism although adopted from the European it was reformed to the new environment and cultural setting of the U.S., in Malcolm Bradbury, 'The Nonhomemade World: European and American Modernism', *American Quarterly* 39, no. 1 (1987): 27–36, https://doi.org/10.2307/2712628.

In 1941, the Museum of Modern Art invited Rudofsky to propose an exhibition on modern architecture, which did not go as planned.[3] His submission included photographs of Mediterranean vernacular architecture of the 1920s and '30s, which were exhibited in 1931 at the Berliner Bauausstellung under the same title, yet MoMA rejected it as "anti-modern"[4], considering it to be anachronistic and against the established International Style and principles established by the key American architects of his time.[5] This reaction represents the different understandings of Modernism between Europe and the United States, but also Rudofsky's particular perspective on Modernism. So, Rudofsky resubmitted an alternative version of his proposal in the "guise" of fashion: "Are Clothes Modern?", with a polemical stance towards Modernist architecture, showcasing the "problems of Modernism" through "problems of clothing".[6] The exhibition was described as "a fresh approach on the subject of clothes",[7] questioning their modernity and exploring their roots through a broad historical and cultural background. The reviews were mixed, some finding the show to be an amusing comparison between "savage" and contemporary fashion,[8] while eliciting cries of absurdity from others.[9] As Felicity Scott mentions, the exhibition questioned the established Modernist approach and promoted a modernism that would incorporate a broader and more varied cultural and ethnographical trajectory.[10] Indeed, it exposed the inappropriateness of the distinction between "primitive" and modern, and, although using fashion to do so, it also addressed the issues that afflicted architectural Modernism; its integration into the establishment, that hindered any critique, its increasingly stylised route detached from "life and context"[11], and its flawed position towards the vernacular.[12] Felix Augenfeld describes Rudofsky as "an architect, engineer, industrial designer, stage designer, editor,

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[3] Felicity Dale Elliston Scott, "'Primitive Wisdom' and Modern Architecture", *The Journal of Architecture* 3, no. 3 (1998): 361-378.

[4] Bernard Rudofsky, *Prodigious Builders: Notes Towards a Natural History of Architecture* (New York: Harcourt Brace Jovanovich, 1977), 366–67.

[5] Scott, "'Primitive Wisdom' and Modern Architecture".

[6] The original title proposed for the exhibition was "Problems of Clothing", which MoMA changed to disguise its polemical stance.

[7] Museum of Modern Art, "Are Clothes Modern?" (Exhibition Press Release) (New York: Museum of Modern Art, 1941).

[8] James Thrasher, Review, "Are Clothes Really Modern, or Why Don't We Park Shoes Outside?" *The Washington Daily News,* (Washington, DC, 1944), B4. In James Madge and Andrew Peckham, *Narrating Architecture: A Retrospective Anthology* (London: Routledge, 2006), 32.

[9] "Mr. Rudofsky, himself an expert furniture designer, as proved by his capturing a prize in the Organic Design show, is a professed chair hater. He prefers shelves which jut out from walls. He would also rather lie down than sit up when he eats", abstract from a review article, Interiors, January 1945.

[10] Scott, "'Primitive Wisdom' and Modern Architecture".

[11] Alessandra Como and Rosemary Dowden, "The Collector of Images: Bernard Rudofsky's Interpretation of Modernism through the Vernacular", in *Getting Real: Design Ethos Now* (Washington, D.C.: ACSA, 2006) 409-417.

[12] An outdated practice which was, however, seen in the Mediterranean architectural investigations of the early Modernists Le Corbusier and Josep Lluís Sert. In Alessandra Como and Rosemary Dowden, "the Collector of Images", 416.

musician, actor, fashion designer, shoemaker, archaeologist, photographer and typographer",[13] giving some insight into the reasoning behind his resolute position against the developing form of Modernism. He was a "disapproving character" who "consider[ed] human dwellings the crowning failure of mankind and has therefore made architecture his main profession", applying these various disciplines to better understand people's "way of life", and therefore to create better architecture. His ethnographic and anthropological approach was an "alien" concept in the American architectural discourse of the '40s.

Figure 52. Installation view of the exhibition, "Architecture Without Architects.", Photograph by Rolf Petersen, The Museum of Modern Art Archives, New York. IN752.3, 1964.

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[13] Felix Augenfeld, "Art News and Notes," *Dispatch Herald*, December 17, 1944.

In 1964, Rudofsky curated a second exhibition at the MoMA, an iconic event that placed him under an architectural spotlight. This time Rudofsky succeeded in setting up an exhibition that directly critiqued architectural Modernism and, furthermore, through his photographs of vernacular architecture he became one of the first architects to represent a certain type of architecture that is still referenced until today in many discourses on the vernacular.[14] The exhibition, "Architecture without Architects", consisted of approximately 122 large-scale photographs[15] that the architect had either taken during his travels or collected from various sources.[16] The photographs ranged from huts in the Ivory Coast to ancient theatres in Peru, monasteries in Greece, and houseboats in Shanghai. This exhibition was "the first of its kind",[17] presenting a global overview of various forms of architecture through an ethnographer's eye[18] and one of the first times that photographic documentation of such diverse indigenous architectural expression had been compiled and exhibited in one place.

Like his previous exhibition, "Architecture without Architects" lacked any kind of specific method to the typologies depicted or the way the images were arranged. Supported on a series of "hollow wall" structures, the large-scale photographs led the visitor through the exhibition, presenting them with images from various locations around the world. The blown-up black-and-white prints ranged from landscapes, aerial views, buildings, community structures, and land formations to depictions of indigenous people in their native environments. It was a representation of the "vernacular" in its broadest sense, where even the term "vernacular" may not have sufficed to cover the various photographic images. In his book Rudofsky uses the terms vernacular, anonymous, spontaneous, indigenous, rural, non-pedigreed and informal,[19] to conclude that all these architectures

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[14] Vernacular discussion in architecture would be considered lacking without the mention of Rudofsky and his work: his work is mentioned in Jennifer Ferng, "Elemental Vernacular: Designing Beyond Human Authorship", *Architectural Theory Review* 20, no. 3 (2 September 2015): 291–95, https://doi.org/10.1080/13264826.2015.1195479, Vincent B. Canizaro, *Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition* (New York: Princeton Architectural Press, 2012), Nan Ellin, *Postmodern Urbanism* (New York: Princeton Architectural Press, 1999), Michelangelo Sabatino, *Pride in Modesty: Modernist Architecture and the Vernacular Tradition in Italy* (Toronto: University of Toronto Press, 2011), to name a few.

[15] The photographs were black and white; colour photography was only becoming more accessible in the 1960s and these photographs were taken in different earlier times of the architect's life, but the monochromatic effect also added to the architectural reading of elements and forms. Ranging in scale, they were installed on stud walls which were 91cm apart, some having a width of 91cm, and others multiplied by 2 or 3 times that. They were displayed either vertically, at a slant or horizontally, parallel to the floor or on the ceiling, depending on their camera's angle, to produce a 3D experience. Their captions, usually names of location or description of the subject, were gathered on separate small white panels. In Andrea Bocco Guarneri, Bernard Rudofsky: A Humane Designer (Vienna: Springer Verlag, 2003), 302.

[16] These sources included anthropological, diplomatic, and military documents, enabling a wide range of perspective views, including some aerial views.

[17] Museum of Modern Art, "'Architecture without Architects' Exhibition Press Release" (New York: Museum of Modern Art, 1964).

[18] Scott, "'Primitive Wisdom' and Modern Architecture", 364.

[19] Bernard Rudofsky, *Architecture without Architects: A Short Introduction to Non-Pedigreed Architecture* (Albuquerque: University of New Mexico Press, 1965), preface.

are basically designed and constructed without architects, resulting in the homonymous title of the exhibition.

The accompanying publication featured 156 illustrations, mostly photographs and a few drawings, accompanied by short descriptive texts. Here, Rudofsky took the opportunity to express his opinions on modern architecture and the architectural education. Taking a cue from his previous exhibition, he presented photographs of "primitive" architecture to question the validity of modern architecture. The structures photographed are indigenous communal spaces constructed by local people with no background in architectural education. He points out that these structures emerge from a fundamental understanding of the community's way of life and of "the *limits* of architecture itself".[20] He sets these examples across modern architecture, pointing out "that "improvement" and "progress" are mostly fictitious and fallacious".[21] His comments present a character driven by a nostalgia for pre-industrial architecture[22] and early Modernist approaches. Rudofsky found in the American established Modernism an ideal ground to express his discontent with the direction of modern architectural development and to comment on its short-sightedness, planting his own seeds towards a "critical regionalism".[23]

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[20] Rudofsky, *Architecture without Architects: A Short Introduction to Non-Pedigreed Architecture*, 28.

[21] Bernard Rudofsky, *Are Clothes Modern?* (Chicago: Paul Theobald, 1947), 236.

[22] Felicity Dale Elliston Scott, *Disorientation: Bernard Rudofsky in the Empire of Signs* (Berlin: Berlin Sternberg Press, 2016), 1.

[23] Nasser Rabbat, 'The Pedigreed Domain of Architecture: A View from the Cultural Margin', *Perspecta* 44 (2011): 6–192, 189.

The term was coined in 1983 by Kenneth Frampton and emerged as a counter-position to the International Style and universalisation, promoting instead an interest to the topographic context, its culture and history. In Léa-Catherine Szacka and Véronique Patteeuw, "Critical Regionalism for Our Time", *The Architectural Review*, no. 1466 (November 2019), https://www.architectural-review.com/essays/critical-regionalism-for-our-time.

The rural before the vernacular

Figure 53. Giuseppe Pagano, Guarniero Daniel, View of exhibition, 'Rural Italian Architecture: Functionality of the Rural House', Milan Triennale, 1936.

While Rudofsky's work seems to be a radical approach towards a different consideration of architecture, another earlier approach in Europe displays a deeper investigation into the vernacular, and which evidently influenced Rudofsky's work. In 1935, a contentious article in *Casabella* critiqued the lack of interest and understanding architects showed towards the rationales for the development of different architectural forms and technologies. Giuseppe Pagano, architect, amateur photographer, and

author of the article "Documenting Rural Architecture",[24] instructed architects to further develop their inquiry through research into rural architecture. The article led several architects to visit Puglia and its distinctive *trulli*, and document and analyse them. Rudofsky was among one of these architects,[25] sharing Pagano's position that architects should learn from this type of architecture,[26] not merely superficially, but really questioning the reasons that defined them. Pagano used black-and-white photography, framing his subjects in an austere and straightforward manner, documenting the structures, the landscape, and their interwoven relationship. Through his photographs, Pagano critiqued "style architecture" and the revival of the picturesque.[27] However, Pagano's approach was not driven by nostalgia – which for Rudofsky was a distinct force behind his ideology – but rather followed a methodology of defining rural architecture and separating it from the "rustic". Neither Rudofsky nor Pagano followed a chronological methodology: however, Pagano's work portrayed a certain scientific analysis that provided a scholarly background to his investigations, presenting the reasoning behind the development of the specific architectural forms he was studying.

Rudofsky shared many views in common with Pagano, and paramount in his ideology was the belief that "rural" or "vernacular" architecture was the product of a wealth of knowledge that architects had an obligation to uncover. His "naturalistic" approach led him to visit and photograph many distant cultures and places and although his work did not follow any particular method or pattern, it was extensive and varied. This, more than anything else, set "Architecture without Architects" apart and enabled Rudofsky's photographic documentation to present to the architectural world a wide area of knowledge that they had yet to fully explore. Rudofsky utilised the photographic medium as a means to bring the subject to the viewer, and, through the "exoticism",[28] variety, and range of these vernacular forms, critique the inadequacy of the direction that contemporary architecture was taking. Rudofsky used this photographic collection to showcase the "perfection" of these non-pedigreed architectures, for they served their purpose and had proved it through their enduring survival. Spanning the continents, the audience might have discerned another underlying commonality between the "exotic" landscapes of the far East, South America, or Africa and the more familiar old towns and villages of European centres, but this can be easily discounted due to the sheer range of different examples presented. Or one can begin looking for variations of similar typologies that emerge, such as arcades, or the different roof structures, yet they are once again minor and brief

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[24] Michelangelo Sabatino, "Documenting Rural Architecture by Giuseppe Pagano," *Journal of Architectural Education* 63, no. 2 (2010): 92–98.

[25] Bernard Rudofsky, "Architettura Senza Architetto in Puglia," *Domus*, no. 431 (1965).

[26] Rudofsky's notes up to 1949 refer to vernacular buildings as rural architecture, referencing Pagano's term. Michelangelo Sabatino, *Pride in Modesty: Modernist Architecture and the Vernacular Tradition in Italy* (Toronto: University of Toronto Press, 2010).

[27] Sabatino defines "style architecture" as "buildings deemed worthy because of aesthetic intent and decorative flourishes." In Sabatino, "Documenting Rural Architecture by Giuseppe Pagano": 92.

[28] It should be noted that this exoticisation is the result of the Western background of both Rudofsky and his audience, idealising non-Western cultures and appropriating them within a Western context

occurrences that become swept away by the next mysterious landscape. This is due to Rudofsky's commentary, explaining that this vernacular architecture was not solely reliant on form or cultural lifestyle but also looked at how it was defined by "emergent and dominant techniques of power."[29]

Rudofsky's photographic depictions were in stark contrast to the modern architecture of the '60s that defined the urban landscape. Through this comparison Rudofsky brought to the viewer's attention the inadequacies of modern design and the deficiency of the modern lifestyle. His critique emerges through his contextualising of the images, creating "parodies or allegories of modern architecture in a state of decline",[30] expressing what is described by Scott as the "growing discontent" with modernism's urban legacy of the '60s and a lack of consideration for the "environmental devastation, untrammelled technological progress, and the discipline's persistent Eurocentrism and disengaged formalism". [31] Despite his less than scholarly and methodological approach, Rudofsky's work posed radical ideas and tackled a variety of issues, strengthening his own view on Modernism and his position against the established Modernist system. His nostalgia for that "otherness" that was portrayed in his photographs and his inquisitiveness about a wider geographical and cultural scale, while not following particular historical or cultural details, resulted in a series of work that distinctly defined the reception of the vernacular in the early and mid-twentieth century and laid the groundwork for further investigation into the photographic representation of the "ordinary" landscape.

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[29] Scott, *Disorientation: Bernard Rudofsky in the Empire of Signs*, 3.

[30] Scott, 2.

[31] Scott, 1. Rudofksy's work brings these subjects to the audience's attention yet does not engage with them himself. His work, however, introduces these gaps in architectural discourse that were invoked by other architects afterwards, i.e., in the example of Kenneth Frampton's "critical regionalism" seen above.

Through Denise Scott Brown's lens

Figure 54. Denise Scott Brown, Architettura Minore on the Strip, Las Vegas, 1966, giclée pigment print, 23.97 × 34.92 cm, (Carnegie Museum of Art).

The architectural discourse on the subject of the vernacular took a brief pause and changed form in the years following "Architecture without Architects". Departing from Rudofsky's rich cultural and contextual vernacular, in the mid- to late twentieth century there was a return to more local investigations of architectural landscapes that had until then been either overlooked or rejected as a subject of architectural study. Architects Denise Scott Brown and Robert Venturi drew the architectural world's attention to American popular culture and introduced Las Vegas and Levittown as vernacular investigations with valuable insights. The architects took up the photographic medium once more to both conduct and communicate their research, this time supported by a stronger methodological approach and with a direct objective of applying this methodology.

Venturi and Scott Brown, in their famous 1972 manifesto "Learning from Las Vegas",[32] advocated that architecture was about image and symbolism just as much as it was about the abstract

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[32] "Learning from Las Vegas" is mentioned here as a broad project including initial individual investigations, the following Yale studio, and its various publications; as a paper: Denise Scott Brown and Robert Venturi, "A Significance for A&P Parking Lots, or Learning from Las Vegas," *Architectural Forum* no. 2 (March, 1968): 37–43, and later edited into a publication with two distinct editions one large format edition designed by Muriel Cooper with a strong focus on the visual component in 1972 and a revised smaller scale edition (23 x 15 cm) in

notions of space and function. "Learning from Las Vegas" began in 1965 with several visits to Las Vegas, where Scott Brown taken aback[33] by the overwhelming visual impact of the Las Vegas Strip and immediately started photographing it.[34] Afterwards, accompanied by Venturi, they began to explore its unique qualities. In March 1968 Scott Brown and Venturi published an article together, "A Significance for A&P Parking Lots or Learning from Las Vegas",[35] leading to the seminal studio theme for Scott Brown and Venturi's Yale architecture class of 1968. [36]On one hand, it focused on the understanding of the automobile-centred phenomenon that was particularly distinctive in Las Vegas, and on the other on the evolution of the methodology of architectural research, by moving from classical architectural references to modern everyday archetypes. The studio project began in the autumn of 1968 with the tutors Denise Scott Brown, Robert Venturi and Steven Izenour assigning their students library research, followed by a ten-day trip to Los Angeles and Las Vegas to explore the satellite of the "auto-centric contemporary American city*"*, asking them to "think critically about the 'ordinary' and the 'everyday' landscapes of the post-industrial city".[37] With their background research already prepared, the group focused during their trip on producing and collecting a large amount of work through photographs, films, drawings, and printed material, which the students presented as part of their studio work after their return to Yale. The phenomenon that was Las Vegas was another example of "Architecture without Architects", emerging through a combination of cultural, practical, and technological circumstances. The studio focused largely on representation, placing emphasis on the mediums of communication that featured on the Las Vegas Strip in the signs, billboards, and extravagant designs of the buildings. Its exploration and examination were an attempt to learn from this local occurrence in a manner similar to the way architects would travel to Rome to study and learn from the city's architecture. Through this parallel, Scott Brown and Venturi suggested that the non-architect-led but intensely popularist phenomenon of Las Vegas was of equal educational standing to that of the pedigreed architecture of Rome.

1977. Denise Scott Brown, Robert Venturi, and Steven Izenour, *Learning from Las Vegas* (Cambridge, MA; London, England: The MIT Press, 1977). Scott Brown expands on the publications in Stephanie Salomon and Steve Kroeter, Still Learning from Denise Scott Brown, 45 Years of learning from Las Vegas, online, 7 January 2014, https://www.designersandbooks.com/blog/still-learning-from-denise-scott-brown.

[33] Nicholas Korody, "Learning from 'Learning from Las Vegas' with Denise Scott Brown, Part 2: Pedagogy," Archinect Features, 2016, [https://archinect.com/features/article/149971833/learning-from-learning-from-las-vegas-with-denise-scott-brown-part-2-pedagogy].

[34] "Upon her arrival, she felt a cold shiver. '"Is this love or is this hate?'" she recalls asking herself. She wasn't sure, but she did know she needed to photograph it before it disappeared." In Avery Trufelman, "Lessons from Las Vegas," *99percentinvisible*, episode 30 (2018).

[35] Denise Scott Brown and Robert Venturi, "A Significance for A&P Parking Lots, or Learning from Las Vegas".

[36] The studio was titled "Learning from Las Vegas, or Form Analysis as Design Research".

[37] Robert A M Stern and Jimmy Stamp, *Pedagogy and Place: 100 Years of Architecture Education at Yale* (New Haven: Yale University Press, 22016), 294.

The publication emerging from the project includes much of the work produced in the studio at Yale, yet it only consists of less than one third of the book. The second and largest part of the book is occupied by the Scott Brown and Venturi's theories and polemics, followed by the third part that includes the work of their practice, Venturi and Rauch. What comes across most vividly in *Learning from Las Vegas*, though, is the strong presence of visual information throughout the book, and particularly the photographs and the photographic methods that helped visualise the subject and, as a result, supported Scott Brown and Venturi's architectural theories. The book is constantly mentioned in pedagogical analyses and recent architectural history and theory,[38] and is seen as a key moment that defined the end of Modernism and the beginning of postmodernist thought. Scott Brown and Venturi's work included a variety of subjects and practices, such as "architectural landscape" and "the vernacular", artistic photography, pop culture, and architectural education, among others. It also consists of one of the few documented pedagogical methodologies where the practice of photography takes such a central position in the development of architectural theory. The photographic discipline is seen here to be both literally and figuratively pursued by the architects and applied practically and theoretically in the definition and development of the new vernacular architecture of '60s America. This was not only evident from the amount of photographic work produced by the students,[39] but also by the number of photographs in the 1972 publication.[40] The photographic medium played the role of documentation technique, similar to that in "Architecture without Architects", but its application was explored further, as an expressive medium through which the vernacular could be instructive.

Scott Brown's role in the project was particularly prominent through her conception of the possibilities and importance of the American vernacular in the mid-60s. Her approach was distinguished by a broad view of the world and an inherent understanding of the cultural pattern of immigration that defined America. Scott Brown was born in Zambia to an Eastern European family[41] who relocated to South Africa, where she began her architectural education[42] at the University of

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[38] A non-exhaustive list of examples: Beatriz Colomina et al., *Radical Pedagogies* (Cambridge, MA: The MIT Press, 2022), Aron Vinegar and Michael J. Golec, *Relearning from Las Vegas* (Minneapolis, Minn.: University of Minnesota Press, 2009), Thomas A. Dutton Mann, Lian Hurst, *Reconstructing Architecture: Critical Discourses and Social Practices* (Minneapolis; London: University of Minnesota Press, 2010), Sarah Chaplin and Alexandra Stara, *Curating Architecture and the City* (London; New York: Routledge, 2009).

[39] It included almost five thousand slides and three thousand metres of film.

[40] A large amount of visual material, much of which was produced by the tutors, was not included in the publication but remains part of the project's archive. In Hilar Stadler, Martino Stierli, and Peter Fischli, *Las Vegas Studio: Images from the Archives of Robert Venturi and Denise Scott Brown* (Zürich: Scheidegger & Spiess, 2008), 162.

[41] From conversation between Denise Scott Brown and author: Scott Brown mentions her parents originate from the Pale of Settlement, probably areas located in current Lithuania, Latvia, and Ukraine, before moving to Africa.

[42] Denise Scott Brown and Peter Reed, "Oral History Interview with Denise Scott Brown, 1990 October 25-1991 November 9." (Archives of American Art, 1991). She mentions here that one of her first documented photographs was of a Coca-Cola sign in Mozambique in 1954.

Witswatersrand.[43] Her studies continued to London, where she studied at the Architectural Association until 1955, and then to Philadelphia in the United States, where she studied city planning and architecture at the University of Pennsylvania until 1960. During those years Scott Brown would continue her long-time practice of taking photographs,[44] which was further encouraged by her first husband, Robert Scott Brown, who helped her learn more about the process of taking photographs and developing them.[45] Her photographs, and her interest in photography, would play an essential role in the development of her theoretical work and would be published and exhibited in various galleries, while her travels would influence and inspire her in a similar way to Rudofsky's experience. Her background affected her perception of Las Vegas, and she saw it through an explorer's eyes as if she were visiting an "indigenous" people;[46] an expression she used to describe the vernacular quality that separated it from the rest of American urban architecture. The photographic work of Edward Ruscha and the research into "landscape" that began with Carl Sauer in Berkeley were key elements that formed the direction of her subsequent work.

Figure 55. Denise Scott Brown Photographs 1956-1966, Carriage Trade, New York, 2018. View of exhibition. Photograph by Nicholas Knight.

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[43] From conversation between Denise Scott Brown and author.

[44] From conversation between Denise Scott Brown and author: her practice of photography is linked to her years in South Africa and her family's proclivity to take many photographs throughout their lives.

[45] Ibid.

[46] "I realized that you take what is indigenous, you take the whole of your heritage that you've learned in history of art and history of architecture, you apply the tools that you've learned to the analysis of this new and exciting emanation – phenomenon", in Denise Scott Brown and Peter Reed, 5. "We are proud of our indigenous styles, yet at times we still require European endorsement to validate them in our own eyes.", in Denise Scott Brown, *Having Words* (London: AA Publications, 2013), 8.
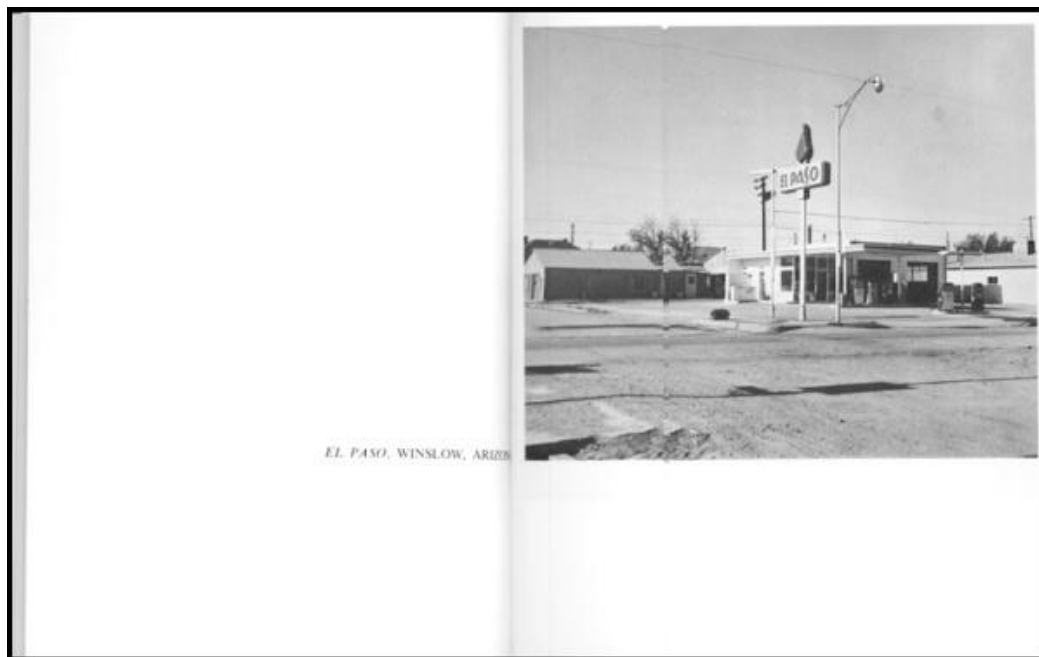
Figure 56. Ed Ruscha, pages from Twentysix Gasoline Stations, 1963. © Ed Ruscha.

Visiting Ed Ruscha's studio was one of the main reasons the Yale studio visited Los Angeles on their way to Las Vegas. Venturi mentions: "Denise discovered Ed Ruscha when she taught at UCLA in the mid-1960s and we both had been learning from the Pop artists and their appreciation of the Everyday from the late 1950s on".[47] The students not only recreated many pieces of his work but also re-enacted many of the ways he produced his photographs and collages: they even titled their works in a similar manner to his, and invited him in 1969 to attend their final critique at Yale.[48] The group showed an enormous interest in Ruscha, which resulted in their work becoming an extension of his by their replication of his methods and approaches in their own projects. In fact, Ruscha's work is seen to have provided many key concepts that defined *Learning from Las Vegas*, essentially becoming a conceptual mentor to their work.

Ruscha played a critical role in this timeline, not only through Scott Brown's work but in the broader development of visual media and the role of photography in the arts. A large part of his influential role was due to his interest in the print.[49] For Ruscha the book was another visual medium

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[47] Alex Farquharson and Neue Galerie am Landesmuseum Joanneum, *The Magic Hour: The Convergence of Art and Las Vegas* (Ostfildern-Ruit: Hatje Cantz Verlag, 2001), 48.

[48] Martino Stierli, *Las Vegas in the Rearview Mirror. The City in Theory, Photography, and Film*. (Los Angeles: Getty Trust Publications, 2013), 147.

[49] Ruscha reinvented the "artist's book" in the 60's, emphasising the communication of the artistic concept through an affordable and accessible medium. His low-cost publications and the possibility of being reprinted multiple times played particular role in his emergence as a notable artist at this time. In Andrew Roth et al., *Artists Who Make Books* (London: Phaidon, 2017).

through which to explore images and words.[50] The same applied to his photography: he stated: "I'm not a photographer at all… I never take pictures just for the taking of pictures; […] I'm not intrigued that much by the medium… I want the end product; that's what I'm interested in".[51] His publications, however, had a greater impact than was imagined even by the artist himself,[52] reaching the attention of Denise Scott Brown and introducing her to a wealth of visual research and applications. She used his work beyond the studio project by publishing his photographs in her own papers: Scott Brown published three of Ruscha's photographs in her article "Pop Art, Permissiveness, and Planning".[53]

Among the subjects that Ruscha was exploring at the time, the everyday, common sight was one of the main things that remained steady throughout the works that Scott Brown, Venturi and Izenour explored and used. The architects also found a common interest in other subjects the artist was focusing on, such as the built environment, the landscape, and symbols of American culture. Ruscha's works *Twentysix Gasoline Stations* (1963), *Some Los Angeles Apartments* (1965), *Every Building on the Sunset Strip* (1966), and *Thirtyfour Parking Lots* (1967) were material that was integral to the architects' research, material they used with their students and replicated. All of Ruscha's works were originally created in Los Angeles; the Yale group recreated them in Las Vegas using the city as its material. *Twentysix Gasoline Stations* and *Some Los Angeles Apartments* provided a context for "typologically ordered photo series that documented the banal"[54] in which the tutors and students could compile their own photographs of Las Vegas' unique typologies. They showcased the automobile-centric urban identity of Las Vegas through Ruscha's photographic methods and approaches. Like tourists, the tutors and students utilised the snapshot method to capture their interests, thus depicting images relating of speed and temporality. *Every Building on the Sunset Strip* became *Every Building on the Las Vegas Strip*, by reproducing the elevations of both sides of the Las Vegas Strip through photography and collage. To capture it the group mounted a motorised 35-mm camera on a car that drove up and down the Strip, following Ruscha's practice in an identical way. They also used this method to create their film *Las Vegas Deadpan*, by rearranging the direction the camera was facing.[55] Accordingly, they hired a helicopter to capture the city from above, documenting the buildings through photographs and also creating the film *Las Vegas Helicopter Ride*,

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[50] In an interview in 1965 he stated, "I am not really interested in books as such, but I am interested in unusual kinds of publications"'. In John Coplans, "Concerning 'Various Small Fires': Edward Ruscha Discusses His Perplexing Publications," Artforum, February 1965.

[51] John Coplans, "Concerning 'Various Small Fires': Edward Ruscha Discusses His Perplexing Publications,"

[52] His first publication, Twentysix Gasoline Stations, began with 400 prints in 1963 for the first edition, which was the only edition that was numbered and autographed, followed by another two editions of 500 and 3000 prints in Ed Ruscha, Twentysix Gasoline Stations, [Third Edition], Printed Matter, Inc, accessed December 20, 2019, https://www.printedmatter.org/catalog/3974/.

[53] Denise Scott Brown, "On Pop Art, Permissiveness, and Planning," Journal of the American Institute of Planners 35, no. 3 (May 1969): 184–86, https://doi.org/10.1080/01944366908977950.

[54] Stierli, Las Vegas in the Rearview Mirror. The City in Theory, Photography, and Film., 132.

[55] Stierli, 140.

following in the footsteps of Ruscha, who had utilised this method to create his *Thirtyfour Parking Lots*.

Figure 57. Ed Ruscha, "Every Building on the Sunset Strip", 1966, 18 x 716 cm long collage of black-and-white photographs, lithograph print (The Getty Research Institute Archive).

Figure 58. Denise Scott Brown, excerpt from Every Building on the Las Vegas Strip, 1968, ("Denise Scott Brown Photographs, 1956-1966" 2018 exhibition at the Carriage Trade Gallery in New York).
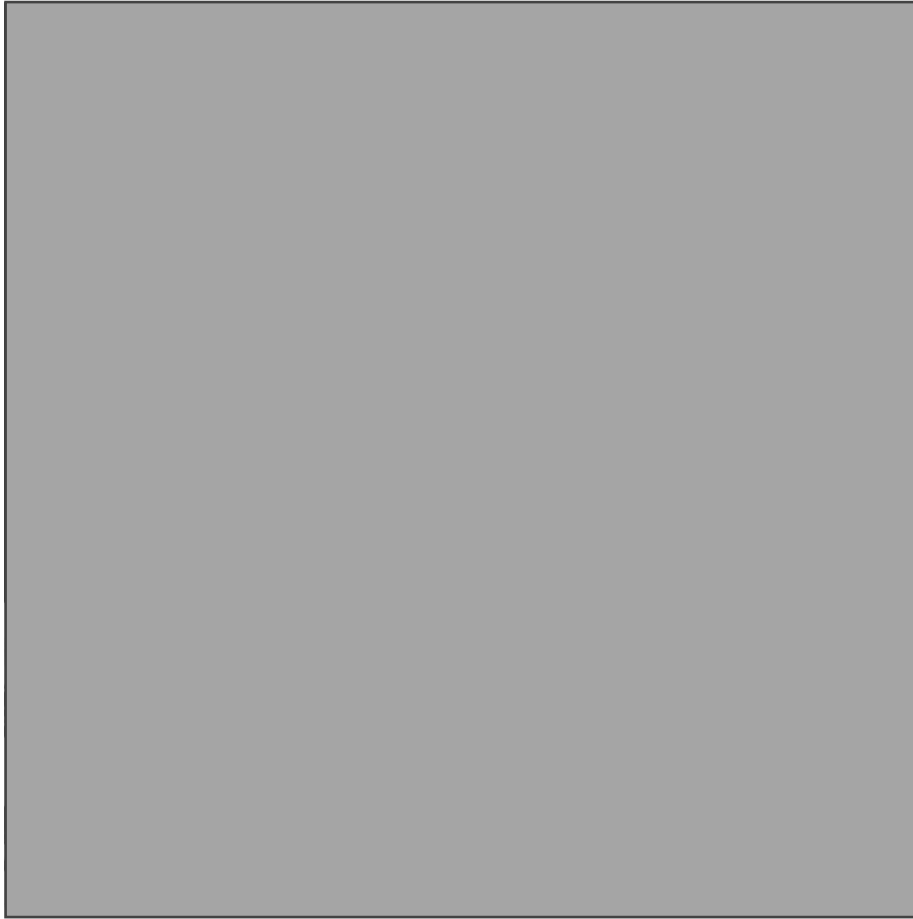
Figure 59. Learning from Las Vegas studio, An "Edward Ruscha" elevation of the strip, 1968, Published in Learning from Las Vegas (Cambridge, Mass.: MIT Press, 1972), 32-33..

Visualising the New Vernacular

Figure 60. Page from article "Speaking of Pictures" in Life magazine, 1938.[56]

The architects' learnings from their visual exploration of the vernacular continued with their 1970 studio project "Remedial Housing for Architects", focusing on the Pennsylvania suburban house developments designed by real estate developer William J. Levitt after the Second World War for veterans and their families.[57] This visionary housing project was an attempt to realise the American dream on a mass scale, providing housing for thousands of Americans who would be part of the "Baby Boomer" generation, enabling low-income families to leave their small urban apartments and own their own house with a white picket fence. The Levittown project was a great success and became synonymous with the ideal middle-class American house while providing the archetype for many of the suburban developments that followed.[58] Scott Brown, Venturi and Izenour were intrigued

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[56] Brown, Denise Scott. 'Speaking of Pictures - Road Signs'. *Life*, 27 June 1938.

[57] It is briefly mentioned in the Learning from Las Vegas publication following the title with 'Or Learning from Levittown' as an 'afterthought' of a subtitle. In Beatriz Colomina, "Mourning the Suburbs: Learning from Levittown," *Public: Art, Culture, Ideas*, no. 43 (2011): 86–97.

[58] Margaret Lundrigan Ferrer and Tova Navarra, *Levittown: The First 50 Years* (Charleston, South Carolina: Arcadia Publishing, 1997), 123-126.

by the way the inhabitants of these houses would decorate and modify them, and following their Las Vegas approach they considered them in a similar way as a type of "media". Their students investigated this as a form of "architecture without architects" that had become ingrained in the American culture, resulting in a literature research that included popular media such as Disney cartoons and sitcom TV shows. The studio presented their work in their final critique that again included many photographs, collages, drawings and diagrams of the suburban houses and their surroundings. The presentation took place in front of students and other Yale faculty, including Vincent Scully,[59] who had been a supporter of Scott Brown and Venturi's work so far; however, it ended with jeering and other strong expressions of displeasure.[60] Where Las Vegas shocked with its flamboyant signs and kitsch design, Levittown had outright enraged the architectural audience. The idea of "learning from" suburbia was too "profane"[61] to be even considered at a time when architects despised this kind of suburban architecture.

Despite the negative reaction, Scott Brown and Venturi persevered in their position, albeit barely mentioning it in their *Learning from Las Vegas* they featured this project alongside their previous work from Las Vegas in their exhibition "Signs of Life: Symbols in the American City"[62] hosted by the Smithsonian Institution in 1976 at the Renwick Gallery in Washington D.C. The exhibition was organised in collaboration with the photographer Stephen Shore, to offer a study of the everyday American environment, both urban and suburban, with a strong focus on the use of photography and other visual mediums including billboards and electric signs. The exhibition was commissioned by the Smithsonian institution to celebrate the American Bicentennial as part of its programme "The American Experience". The program explored the "founding and building of the Nation from many perspectives" and in this context the "Signs of Life" was selected to illustrate "the rich pervasion of symbols and signs which existed in the historical city and continue today".[63] The exhibition was set up in three distinct categories – The Strip, The Street, and The Home – that created a sort of theme park arrangement; one was Route 66, the other was an area representing the suburban environment, and there were three different types of homes, one for each class of family.[64] All were

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[59] Scully's son Dan Scully was one of the students who partook in the studio. In Hilar Stadler, Martino Stierli, and Peter Fischli, *Las Vegas Studio: Images from the Archives of Robert Venturi and Denise Scott Brown* (Zürich: Scheidegger & Spiess, 2008), 190.

[60] Beatriz Colomina, "Mourning the Suburbs: Learning from Levittown," *Public: Art, Culture, Ideas*, no. 43 (2011): 86–97.

[61] Beatrice Colomina surmises that the scandalous project resulted in the ending of Venturi's teaching career, in Colomina, "Mourning the Suburbs: Learning from Levittown."

[62] Inc. Venturi, Scott Brown and Associates, "Signs of Life: Symbols in the American City" (The Smithsonian Institution, 1976); Lloyd E Herman and Venturi and Rauch, *Signs of Life: Symbols in the American City* (S. l. Aperture, 1976).

[63] Johnnie Douthis, "Smithsonian Event in the Bicentennial Year," *The Smithsonian Torch*, no. 76–1 (1976), 1–3.

[64] Olivier Lugon, "Before the Tableau Form: Large Photographic Formats in the Exhibition Signs of Life, 1976," *Études Photographique*s, no. 25 (2010), http://journals.openedition.org/etudesphotographiques/3440.

represented through visually impactful media; there were large advertisements and signs that were overwhelming in the confines of the exhibition, backlit photographs that described the research through photographs and text, and life-size replicas of the interiors and exteriors of homes. The exhibition and its images employed colour as it not been seen before in previous iterations of the project, a fact that could be construed as a commentary on the impression that black-and-white images gave, their "legitimate" employment in architectural discourse versus the more sensational approach of this exhibition.
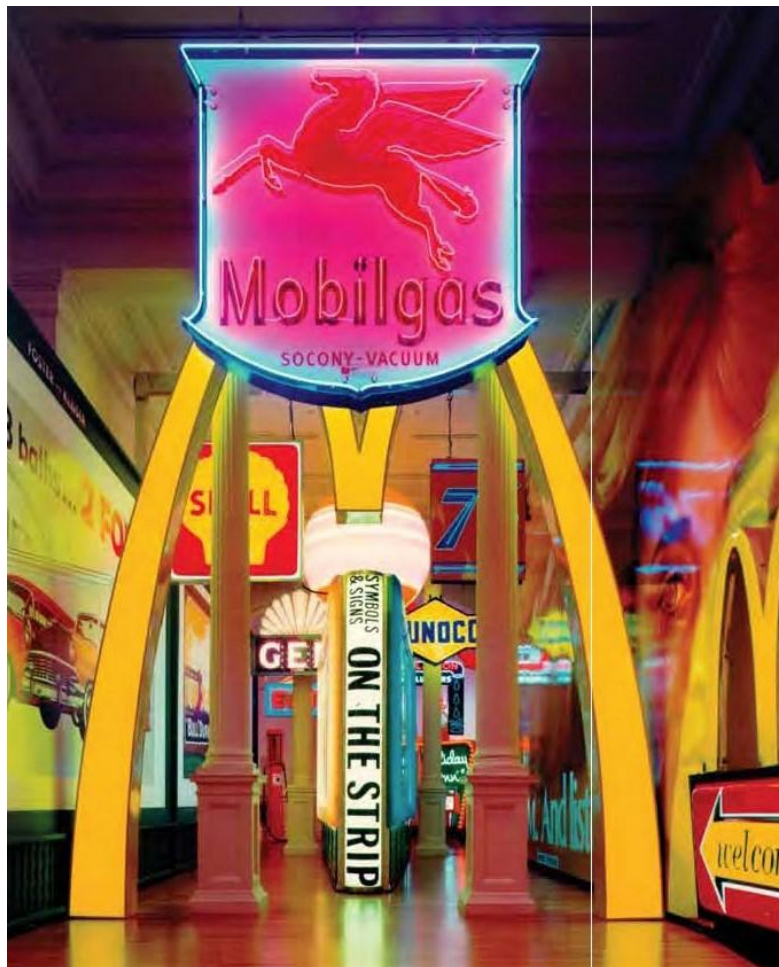
Figure 61. View of the exhibition, "The Strip", Signs of Life: Symbols in the American City, Smithsonian Institution, Washington D.C. 1976.

Figure 62. View of the exhibition, "The Home", Signs of Life: Symbols in the American City, Smithsonian Institution, Washington D.C. 1976.

The Home presented a series of model rooms designed by interior designer Dian Boone that mirrored ordinary American house interiors. These rooms were constructed in great detail, from the antique furniture to the family photographs adorning the end tables. They were reconstructions of the most typical interiors of the time, each a representation of a lower-, middle-, and upper-class suburban house. The rooms were peppered with comic-book style speech bubbles that offered a commentary on the various elements on display. The same method was applied to the exterior areas, that were called The Street. There were large photographic prints that reproduced the environment surrounding these houses, from the urban to the suburban, again recreating the outdoor spaces with furniture and other paraphernalia, followed by the explanatory speech bubbles. These set-ups utilised large-scale prints to create virtual perspectives of the different streetscapes. The Strip, on the other hand, was a recreation of the Las Vegas strip with an abundance of backlit images, gigantic ads, and neon signs, illuminating the whole room.[65]

The three representational forms of the exhibition followed a diorama-like installation where visitors could experience the ordinary as a spectacle. The overlaid information and the number of images provided the visitor with enough material to spend a significant amount of time analysing and "seeing" layers upon layers of symbols embedded in their everyday experience.[66] When Venturi and

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[65] Venturi, Scott Brown and Associates, "Signs of Life: Symbols in the American City."

[66] The three-dimensional expression of their project was influenced by the sculptor Claes Oldenburg, through which the architects attempted to convey that these images were not only a representation of the everyday but an attempt to replicate them. Their use of the "deadpan" as a means to "cultivate responsiveness toward the

Scott Brown commissioned Shore for the exhibition, they provided him with a list of various architectural forms to photograph. Shore spent the two years before the exhibition exploring the United States, from Los Angeles to New York, producing images that "could be read as elements of architectural theory as much as autonomous photographic works".[67] Shore also included in the show a selection of his photographs from Luzzara as response to Paul Strand's comment. His work was featured in a range of different ways, on cards, posters, medium-sized prints, and large photographic formats that took up the size of walls. It was the first time that Shore had ever worked on such large-scale photography,[68] using a technique that had only been employed until then in advertising and decoration (e.g., giant billboards, building coverings), which allowed for a sharp enlargement of the photographic image to a billboard-sized print with illusionistic properties. Izenour and Shore, intrigued by the technique's capacity to "create" virtual spaces, decided to apply it into a museum context for the first time by using it for the set-up of the dioramas. The use of these large-scale photographic prints was received with both awe and aversion. On one hand it was a technological feat that hinted at a number of creative uses. On the other, in an exhibition space, it was considered "unbelievable vulgarity"[69] to use this kind of commercial approach in an artistic context.

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imminent world" becomes expressed here through the analysis of the layers and by having the "material speak for itself", without nuances or hidden messages. In Aron Vinegar, *I Am a Monument on Learning from Las Vegas* (Cambridge, MA: MIT Press Ann Arbor, Michigan ProQuest, 2014), 73.

[67] Lugon, "Before the Tableau Form: Large Photographic Formats in the Exhibition Signs of Life, 1976."

[68] He utilised a technique that originated in Japan for making photographic enlargements, that had recently been introduced in the United States by 3M, which they called Architectural Paintings.

[69] Lugon.

Figure 63. View of the exhibition, "The Street", Signs of Life: Symbols in the American City, Smithsonian Institution, Washington D.C. 1976.

As an American visitor to this exhibition, it must have been an experience that was equally shocking and insightful, seeing the things they passed by in their everyday lives that someone else had documented, analysed, and considered important or interesting enough to display as part of a bicentennial exhibition. This, of course, was the source of much strong criticism that suggested the exhibition was an idealising commentary on the modern lifestyle, making an example of lower middle-class style and promoting consumerism, as a satire on American life, or a kitschy reproduction of spaces that had no place in an educated architectural dialogue.[70] Venturi and Scott Brown, however, were more interested in objectively observing without judgment. Besides, there were deeper elements in this research that these architects were looking for than those the critics were concerned with: elements that until *Learning from Las Vegas* no one had appeared to take notice of in the

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[70] Lugon.

architectural discourse. As Venturi explained in an interview, "We respond to circumstances. We don't start out with a theory; we respond to circumstances and then bring theory to them."[71]

Figure 64. Denise Scott Brown, taking a picture of herself, 1960, (from the Archives of Robert Venturi and Denise Scott Brown).

Learning from the vernacular

Throughout these projects the photograph changed in form and role, yet it consistently retained its position in communicating the vernacular. It not only enabled the expression of architectural beliefs, resulting in a manifesto that promoted a new architectural pedagogical approach but also led to a pioneering way of practising architecture. The latest cameras were more portable and easier to use and accommodated and promoted this exploratory undertaking of vernacular "seeing", making photography not only accessible to everyone but also everywhere and at any time.[72] As Scott Brown and Venturi once stated: "Learning from the existing landscape is a way of being revolutionary for an

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[71] Robert Venturi, Denise Scott Brown. "Robert Venturi and Denise Scott Brown." Interview by Barbaralee Diamonstein-Spielvogel. *American Architecture Now*, 1984.

[72] As shown in the photo above where Scott Brown is taking a photo of her reflection using what seems to be a 35mm camera (possibly a half frame Minolta, or Kodak), light weight, compact, sturdy and easy to use.

architect. Not the obvious way, which is to tear down Paris and begin again, as Le Corbusier suggested in the 1920s, but another way which is more tolerant: that is to question how we look at things".[73] Both Scott Brown and Venturi believed in and promoted this position; however, Scott Brown can be identified as the leading personality behind this staunch polemic approach. Through her interviews and work Scott Brown, as a photographer and visionary, created a bridge between architecture and numerous other disciplines and practices. Scott Brown's background allowed her to view the American landscape as a culmination of different ideas that she managed to portray through her photographs and the visual media she created together with her colleagues and students. The theory that supported her ideological positions came from the arts, geography, and sociology, among other disciplines, as seen through her collaborations with the ethnomusicologist Charles Seeger, sociologist Herbert J. Gans, and artists and photographers Ed Ruscha and Stephen Shore.[74] This pedagogic approach lay at the core of her thinking: in one of her essay: in fact, she named architects and urban designers "Johnnies-come-lately", as learning from others was not something new, yet architects and urban designers were shocked by it.[75] This pedagogical issue that Scott Brown raised touched upon several underlying issues in architectural education and practice, but, however, failed at the time to be taken seriously due to her all-encompassing approach of learning from other established and academic disciplines as well as from popular culture, a movement generated by the masses.

Scott Brown learned from these other disciplines. For one, the cultural landscape was a subject that was being researched more than a decade before Scott Brown's first visit to Las Vegas. Carl Sauer, professor of geography at the University of California, Berkeley, until 1957, was responsible for establishing the study of cultural landscape as an academically legitimate subject.[76] This, of course, included researching the subject from several disciplinary standpoints, including design and architecture. This research was continued by writer John Brinckerhoff Jackson, who had a background in architecture and a great interest in landscape. In "The World Itself", J.B. Jackson analysed the term "landscape" pointing out its link to human intervention; he defines it as "a composition of man-made or man-modified spaces to serve as infrastructure or background for our collective existence", a background he continues "means that which underscores not only our identity and presence, but also our history".[77]

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[73] Scott Brown and Venturi, *Learning from Las Vegas*, (Cambridge, MA; London: The MIT Press, 1977), 3.
[74] Andres Ramirez, "Beside the Point, the Architectures of Denise Scott Brown," in *Legacy: Generations of Creatives in Dialogue* (Amsterdam: Frame, 2018), 167.
[75] Scott Brown, "On Pop Art, Permissiveness, and Planning.": 185.
[76] Robert Adams et al., *New Topographics: Photographs of a Man-Altered Landscape* (Rochester, N.Y: International Museum of Photography at George Eastman House, 1975), 20.
[77] J.B. Jackson wrote several essays which he published between 1951-1967 in his magazine Landscape. The specific quote may be found in the collection of essays: John Brinckerhoff Jackson, "The World Itself," in *Discovering the Vernacular Landscape*. (New Haven; London: Yale University Press, 1986), 8.

The research into the cultural landscape aimed to have an immediate impact on the built environment, that would come through a better understanding of the cultural and historical subject. At the same time, it was open to a variety of disciplines and proposed the use of different and new types of methodologies. J.B. Jackson was an intellectual inspiration to both Scott Brown and Venturi[78] and subsequently greatly influenced their position on the subject of the landscape, as these ideas can be seen to resonate throughout their project.[79] Jackson had studied architecture, art history, and geography and was assigned to military intelligence during the Second World War; this education formed his personality, and he had a firm grasp of a range of subjects, interchangeably applying them in his research and practice. Photography was also a central part of his practice, which he used in his military role in the form of aerial photography, and later on as a method of research, documentation and supporting material.[80] His position on the landscape was defined by all of these elements, that were expressed in the landscape's visual character and its essential purpose: "This is how we should think of landscapes, not merely how they look, how they conform to an esthetic [sic] ideal, but how they satisfy elementary needs…".[81] This shows how integral the theories of cultural landscape were to the new "ways of seeing" that Scott Brown and Venturi were trying to teach the architectural community; "as in cultural landscape studies, the didactic intent was to promote visual literacy, connoisseurship of the everyday".[82]

This corresponds with the subject expressed in Scott Brown and Venturi's work – the everyday, the ordinary, and the mundane, and simultaneously it connects through the didactic approach of their book, as the result of a studio course and at the same time disseminating its teachings to its readership. Visual literacy takes many forms, seen in the different types of imagery in their publication, but is also evident throughout Scott Brown's work through her photography. Scott Brown would often use the camera to document, explore, and express her ideas.[83] Her photographs span decades and many geographical locations, from the early '50s in South Africa, London, and Venice, to the '60s in Las Vegas and later. Many of her photographs appeared in various publications and exhibitions beginning with *Learning from Las Vegas* and "Signs of Life".[84] This also shows that

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[78] Scott Brown comments on their common interests and influential relationship in Denise Scott Brown, 'Learning from Brinck', in *Everyday America: Cultural Landscape Studies after J. B. Jackson*, ed. Chris Wilson and Paul Groth (Berkeley: University of California Press, 2003), 49–61.

[79] Ed Ruscha, *Edward Ruscha: Real Estate Opportunities* (Hollywood: Heavy Industry Publications, 1970), 78.

[80] Alexander B Craghead, "The [Rail]Road Belongs in the Landscape: J.B. Jackson and the Photographic Depiction of American Railroads," *Railroad Heritage*, 2017.

[81] John Brinckerhoff Jackson, "Learning About Landscape," in *The Necessity for Ruins and Other Topics* (Amherst, Mass.: University of Massachusetts Press, 1980), 12–17.

[82] Adams et al., *New Topographics: Photographs of a Man-Altered Landscape*, 23.

[83] In an interview with writer and curator Andres Ramirez she mentions 'I was passionately taking photographs of things I liked that had to do with ideas.' In Ramirez, "Beside the Point, the Architectures of Denise Scott Brown."

[84] Photographs from Las Vegas are seen in several of her papers on Pop, i.e., Denise Scott Brown, 'On Pop Art, Permissiveness, and Planning', *Journal of the American Institute of Planners* 35, no. 3 (May 1969): 184–86,

as well as learning from reading cultural landscapes she also learned from photography on how to see them through different lenses. Her interaction with the artists with whom she collaborated in these projects is quite distinctive, as are the reasons she is interested in them. Specifically, Scott Brown found a wealth of methodologies, practices, and theories in the work of Ruscha that she adopted in practice in her own projects, whereas in Stephen Shore's case it appears that it was his inquisitiveness in exploring the everyday and showcasing it as if it was quite extraordinary that led Scott Brown and Venturi to collaborate with him in their exhibition.

Additionally, Scott Brown's position relied heavily on the concept of the popular. Her strong belief in learning from others is focused on 'others' as the common people, resulting in her work being heavily criticised by her contemporary architectural peers, who considered her proposal almost (if not entirely) absurd. This is documented in one very memorable debate between Scott Brown and Kenneth Frampton.[85] Their strong disagreement focused basically on three points: the definition of "the people", the value of popular culture and the role of the architect in response to the first two. In short, Scott Brown was suggesting that "the people" from whom architects should learn and for whom they should design are not a uniform group, but they consisted of diverse "subcultures". She also defended the idea that popular culture (a result of media culture, consumerism, and industrialisation) was a force strong enough to transform the environment and should be considered the new "vernacular". Lastly, she critiqued the approach of Modernist architects that would patronisingly impose certain environments on people who did not want them, saying that instead they should listen and adhere to what people were asking for, which would align, of course, with the popular culture to which they were accustomed. Frampton, on the other hand, viewed the subjects that Scott Brown explored as serious issues that need to be amended. His understanding of "the people" lies closer to the definition of "the masses" which he describes as "silent" and "constrained", while his response to Scott Brown's popular culture is that it is an "engineered fantasy of mass taste", something produced and not created, distinguishing it from Pop art and characterising it as a debased culture of the uneducated classes. Even though they both recognised that the people are not all the same, their discussion seemed to have to resulted in a situation in which "the people" are a majority that for Scott Brown become her popular culture case study and for Frampton the object in need of reform through an architectural approach.

It is evident that the debate revolved around different understandings of the points made, that in turn resulted from different values and opinions. It helps to consider how these two people viewed

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https://doi.org/10.1080/01944366908977950, and Denise Scott Brown, 'Learning from Pop', *Casabella* 35, no. 359–60 (1971), 62–66.

[85] These are the consecutive articles: Denise Scott Brown, "Learning from Pop," *Casabella* 35, no. 359–60 (1971), 15; Kenneth Frampton, "America 1960-1970: Notes on Urban Images and Theory," *Casabella* 35, no. 359–60 (1971), 31–33; Denise Scott Brown, "Pop Off: Reply to Kenneth Frampton," *Casabella* 35, no. 359–60 (1971), 41–45. The debate is also further expanded upon in Debora Fausch, "She Said, He Said: Denise Scott Brown and Kenneth Frampton on Popular Taste," *Footprint* 8, (Spring 2011): 77–89.

architecture, one seeing modern architecture as an imposition that should be overturned through activism and the other seeing it as a higher didactic power that is there to educate and lead, reinforcing Modernist beliefs. Scott Brown's generalisations of American culture, dividing it into the popular, the elite, and the undefined "people", also did not help in strengthening her position. However, a certain approach to the vernacular can be discerned. Where Modernists would approach the vernacular in a very selective way, Scott Brown is seen at least to be trying to approach it in its entirety in a practical way. As seen from Rudofsky's contemporaries' attitude to Modernism, the subject was not entirely eschewed, but rather approached as something exotic and predominantly considered through an investigation of form rather than as a source of general learning. Le Corbusier's research into the vernacular in the form of grain elevators and Mediterranean construction, published in 1957, and James Stirling's investigation in "The 'Functional Tradition' and Expression" in 1960 were focused more on the physical aspects of function, construction, and style. In the mid-1960s Rudofsky proposed a broader variety of case studies and introduced the consideration of the cultural and social aspects of architecture. In the 1970s Scott Brown consolidated this and pushed the boundaries even further by expanding the definition of vernacular contemporary American architecture, saying it was not only an "architecture without architects" but also an "architecture" designed by Pop. And through it all, the media used to construct this research on the vernacular can be seen to rely strongly on the photography, making it impossible to imagine how these positions could be constructed and supported without the visual research and representation of the actual architectural typologies that this discussion focused on.

The vernacular in art photography

"The vernacular" in photography ranges from landscape photography and amateur portraits to travel photos i.e., souvenirs and snapshots. In fact, "vernacular photography" could be interpreted as all the photographs of the everyday that are largely unexamined by people in the field,[86] as a result of the camera becoming a more accessible device and photography thus an increasingly widespread practice. However, photography as an artistic discipline began, at some point in time, to use the everyday, vernacular subject to critique the reality of the world in contrast to how people had "seen" it until then. This form of conceptual photographic practice emerged during a time when Pop art was challenging the traditions of fine art, using images and objects taken from mass culture, advertising, and the mundane. Pop art had already begun to take form after the mid-1950s, and many Pop artists,

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[86] Stacey McCarroll Cutshaw et al., In the *Vernacular: Photography of the Everyday* (Boston: Boston University Art Gallery, 2008), 13.

such as David Hockney, Richard Hamilton and Andy Warhol, used photography as a means to portray or comment on the modern way of life and the ubiquity of consumerism.[87] In a similar fashion, photographers would employ the "everyday" in their work, presenting ordinary surroundings, common people and quotidian situations as a means to redirect the audience's view of reality to the actual rather than the ideal.

In 1960s United States this came as a distinct change from the direction photographers had taken up till then in photographing their surroundings. Most notably, it was a response to Group f/64,[88] known for their representations of the American landscape that resonated with sublime monumentality.[89] Some of the key photographers in this collective included Ansel Adams, Imogen Cunningham, Willard Van Dyke, and Edward Weston, all of whose work was influenced by the objective and sharp photography of their East Coast counterparts, most notably Paul Strand. Their work followed the movement's manifesto: some of its key concepts included technical proficiency to produce sharp images with high contrast, and a commitment to presenting mundane things through new perspectives infused with meaning, yet devoid of any social or political meaning. These artists saw themselves as modernists, transforming the world to a more ideal version through a studied and unwavering methodology and producing work that presented photography as a "pure" form of artistic expression.[90]

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[87] Liz Wells, *Photography: A Critical Introduc*tion (London: Taylor & Francis, 2015), 273.

[88] Otherwise known as the West Coast Photographic Movement.

[89] Roland Turner, *April: Ansel Adams, The Annual Obituary* (New York: St. Martin's, 1985), 188.

[90] Alma Davenport, *The History of Photography: An Overview* (Albuquerque: University of New Mexico Press, 1991), 68.

Figure 66. Installation views, New Topographics: Photographs of a Man-altered Landscape, 1975, George Eastman Museum.

The new generation distanced itself from the idealisation of the American landscape and focused on its reality. In 1975 the exhibition "New Topographics: Photographs of a Man-Altered Landscape"[91] presented the work of a group of photographers who had found their subject in a less than ideal representation of the American landscape, which constituted an important message about human intervention and mass culture on the 'natural' environment.[92] As a result of their common approach and subject matter, the exhibition's curator, William Jenkins, named their collective style after the exhibition's title, "New Topographics", thus creating a new movement of landscape photography. The American landscape, therefore, through the lens of these photographers, turned from a transcendent, quintessential natural environment that was associated with the American West and open wilderness to stark industrial and suburban views.[93] All of these photographers were already well-known artists and used certain methodologies that gave their work a unique portrayal of the subject in its own accord. The Bechers, who were at the time teaching at the Kunstakademie Düsseldorf and had previously exhibited their work both in Europe and in the United States, participated with their characteristic photographs of industrial landscapes. They focused on nineteenth-century industrial structures in Canada and Pennsylvania, which they photographed during

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[91] Adams et al., *New Topographics: Photographs of a Man-Altered Landscape*.

[92] The exhibition was curated by William Jenkins at the International Museum of Photography at the George Eastman House in Rochester, New York from October 1975 until February 1976. The participant artists included eight American photographers: Robert Adams, Lewis Baltz, Joe Deal, Frank Gohlke, Nicholas Nixon, John Schott, Stephen Shore, and Henry Wessel Jr., and the German couple Bernd and Hilla Becher.

[93] The photographic prints ranged between approx. 15x20 and 20x40 cm. Exceptions included Frank Gohlke's prints, which were approximately 36.5x45.4 cm. and Bernd and Hilla Becher's larger arrangements, that featured several prints on single large tableau mounts (see previous installation views).

their trip to the United States. Robert Adams challenged the image of the landscape of the American West by presenting a "man-altered landscape" with tract houses, drive-in cinemas, and other human interventions in the once natural landscape. Despite the overall objective and neutral tone of the exhibition, Adams, among several other artists, managed to express the reality that challenged the widespread perception of the American "Wild West" landscape through this artistic approach. In his case, his images produced a feeling of irony set against the traditional images of the American landscape that suggested an unspoilt wilderness, as photographed by Ansel Adams,[94] or the photographic approach of Group f/64. Similarly, Lewis Baltz utilised the typological grid and a critical eye to depict a landscape that is full of human traces. Stephen Shore, on the other hand, was the only artist who exhibited photographs printed in colour, applying a snapshot style to show streets and alleys of various towns that he visited during his road trip from the East to the West coast.

Figure 67. Lewis Baltz, South Wall, Mazda Motors, 2121 East Main Street, Irvine, from the portfolio The New Industrial Parks near Irvine, California, 1974, 15.24 x 22.86 cm, gelatin silver print, (collection SFMOMA). © Lewis Baltz.

These artists, despite their different approaches and views of the subject, found common ground in their approach to the representation of the landscape. First, the artists used their work to critique the term "landscape" for its reference to the natural environment which previous landscape photographers had adopted, such as Ansel Adams, Paul Strand, and Alfred Stieglitz, and presented

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[94] Kelly Dennis, "Landscape and the West – Irony and Critique in New Topographic Photography," in *Cultural Landscapes in the 21st Century* (Newcastle-upon-Tyne: Forum UNESCO University and Heritage 10th International Seminar, 2005).

their modern human-modified "landscape" as seen through their eyes. Secondly, all the artists attempted to create an "objective" view of their subject, their images devoid of any personal preference or comment on the subject. The artists remained neutral to enable their subject to reach the viewer with its own identity. Therefore, the exhibition became defined by an objective approach that offered a stark representation of the American landscape. The photographs were a way of conveying American topography stripped of any artistry, emotion or opinion, rendering this exhibition as a portrayal of the American banal.[95] Unintentionally, however, it resulted in bringing together a group of people who engendered a movement espousing the photographic representation of the built landscape, and as a result these artists were "associated with a significant shift in attitude toward the landscape as photographic subject and cultural preoccupation".[96] Different iterations of the New Topographics movement continued to take place in subsequent years: an exhibition of the most recent took place between 2011 and 2012 at the Bilbao Fine Arts Museum in Spain, while many of the artists, or aspects of their work, are still associated with the movement.

The significance of New Topographics lies in the timing of the exhibition and the presentation of this particular work by these artists in their respective styles. Amid the financial stagflation and political anxiety that marked the United States in the 1970s, this group of artists documented the mundane, the everyday moments of their surroundings. Their objective approach offered no interpretation or complex meaning, instead giving a refreshing view of the world in those economically turbulent times. For the visitors to, and critics of, the exhibition, this perspective provided a grounding in reality and a window through which they could reassess their surroundings anew. Furthermore, the exhibition seems to have been also a timely response to the 'modernist' Group f/64 movement. In 1932 the Group f/64 was formed in a similar way, when the main protagonists of the group participated in an exhibition at the de Young Museum in San Francisco, at the same time displaying their manifesto. Several years later, the New Topographics photographers came together under the curatorial eye of Jenkins, who was a catalyst for this new movement. What emerged from this, however, might have had even greater success than its own newly founded movement. Although the work of Bernd and Hilla Becher was the main catalyst for the direction of the Düsseldorf School of Photography, the New Topographics exhibition is often seen as the precursor of the overall "new objective" approach to artistic photography of the architectural landscape. In the grander scale of international photographic movements, it may definitely be considered as a pivotal moment, and even more so in regard to the direction of American landscape photography and the development of photography as an art form. These artists utilised the writings of J.B. Jackson and found a way of

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[95] Adams et al., *New Topographics: Photographs of a Man-Altered Landscape*, 16-17.
[96] Adams et al. 11.

portraying the landscape as it had become: a human-made construct.[97] Their photography presented the landscape as an extension of the built environment, which at the time was a new concept that challenged common perceptions. Their representation through an objective approach gave their work "the appearance of neutrality";[98] however, their work was also associated with the deadpan which allowed them, through this objectivity, to continue to express a sense of irony and critique. Therefore, Jackson's view that "all land on Earth is somehow altered by human hands"[99] was visually supported through this movement's photographs that consequently negated Group f/64's vision of an American wilderness, turning it into "a man-made wilderness".[100]

The role of New Topographics in the photographic presentation of the surrounding environment, and the ordinary, provided a context for artists who were already photographing these subjects, and even though it did not necessarily define them it certainly encouraged the direction they were taking at that time, offering them validation.[101] Two artists in particular approached these subjects in a manner that was especially analytic. One of these was Stephen Shore, whose colour photography of the simple everyday things shocked in its contrast to the other works in the "New Topographics" exhibition. Shore helped to establish colour photography as an accepted art form through effort and persistence, and he experimented with the snapshot, the everyday, and the representation of the landscape. The second, although neither a participant in the exhibition nor a photographer himself, was an artist who had certainly an influential presence in the group.[102] Ed Ruscha, the Pop and Conceptual artist from Los Angeles, became known for his deadpan, objective representation of the everyday, and, through his photographs, collages and publications, he made the ordinary and the often disregarded into something worth paying attention to. These two artists differ from the other New Topographics artists mainly through their distinctive trajectories in the artistic photography of the everyday, their definition of the deadpan and, as a result of these, their influence on "Learning from Las Vegas" and the architectural approach that responded to it.

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[97] Kim Sichel, "Deadpan Geometries: Mapping, Aerial Photography, and the American Landscape," in *Reframing the New Topographics*, ed. Greg Foster-Rice and John Rohrbach (Chicago: Center for American Places at Columbia College Chicago, 2010), 88.

[98] Sichel, 89.

[99] Sichel, 88.

[100] Carter Ratcliff, 'Route 66 Revisited: The New Landscape Photography', *Art in America* 64, no. 1 (1976), 86–91.

[101] Adams et al., *New Topographics: Photographs of a Man-Altered Landscape*, 56.

[102] Ruscha played a particular role in the developments explored here but also in the consideration of photography's role as a "way of seeing", mostly through his own perception of the nature of photography as a means to express an idea. He used photography amongst other forms of expression indistinguishably from the perspective of Conceptual art (that transcended the individual mediums), thus exercising a "ways of seeing" that encompassed the visual arts as a whole without being tied down to each disciplinary approach and their boundaries. In Rosalind Krauss, *Under Blue Cup* (Cambridge, Mass: MIT Press, 2011), 20.

Ed Ruscha: Finding the ordinary

Ed Ruscha is often mentioned by Jenkins and other curators and critics not only as a major influence but even as the "progenitor of New Topographics photography".[103] One of the main justifications for this accolade was Ruscha's photographic subjects in the 1960s and 1970s, which were disseminated widely in the art world through his publications.[104] His unique approach, and the way he "saw" the world affected many artists, including those in the New Topographics group, who considered his work a "delight",[105] and it became their "photography degree zero".[106] Born and educated in Nebraska, Ruscha worked for most of the '50s and '60s in Los Angeles in advertising agencies and magazines as a layout designer, creating many works of his own through the use of mixed media.[107] He produced paintings, collages and photographs influenced by his surroundings, and many of his works focused on the automobile, the urban landscape, and American culture. His use of words and phrases in his collages and paintings and the "everyday" subject of his representations linked him to the Pop art movement.

The everyday, the banal, the ordinary, are some of the words that define the subject matter of Ruscha's photography. The subjects would be various "architectural motifs" that were found in his environment, and which expressed certain aspects of contemporary living. He would also experiment with different media and methods of capturing these subjects, which distinguished him from other contemporary photographers. Ruscha mostly applied an objective approach in his photography, but often a certain irony can be seen in his work. in *Real Estate Opportunities*,[108] a series of photographic documentations of houses and other real estate (property) for sale, Ruscha searched for properties to photograph that had a "For Sale" sign in front. These images were not particularly intended to be to

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[103] Virginia Heckert and Edward Ruscha, *Ed Ruscha and Some Los Angeles Apartments* (Los Angeles, California: J. Paul Getty Museum, 2013), 18.

[104] His form of artist's books is a clear example of this mix of mediums in Ruscha's work that expresses the approach of Conceptual art described above.

[105] Stephen Shore mentions: "Ruscha's work may have caused irritation in some parts of the art world, but for me and my friends his books were a delight." In Susanne Lange, "A Conversation with Stephen Shore," in *Bernd Und Hilla Becher Festschrift: Erasmuspreis 2002* (München: Schirmer/Mosel, 2002), 48.

[106] "Photography Degree Zero" refers to an anthology on Roland Barthes's "Camera Lucida": Geoffrey Batchen, *Photography Degree Zero: Reflections on Roland Barthes's Camera Lucida* (Cambridge, MA: MIT Press, 2009). Lewis Baltz mentions it in a conversation with Britt Salvesen, November 14 and 16, 2006, as having a great impact and being an impressive book. Adams et al., *New Topographics: Photographs of a Man-Altered Landscape*, 62.

[107] Edward Ruscha worked at Carson/Roberts advertising agency in Los Angeles in 1960 and for *Artforum* magazine between 1965-1969. Karin Breuer and Fine Arts Museums of San Francisco, *Ed Ruscha and the Great American West* (San Francisco: Fine Arts Museum of San Francisco, 2016).

[108] Edward Ruscha, *Edward Ruscha: Real Estate Opportunities*. (Hollywood, CA: Heavy Industry Publications, 1970).

aesthetically pleasing, unlike the usual promotional photographs of properties for sale. They were often flat, slightly off centre, a little skewed, identified by their street names. On the surface, it seems as if *Real Estate Opportunities* is a rough documentation of properties for sale, but the viewer can read beyond this and question what the subject of these images stands for, such as "real estate", "property", "opportunity", "advertising" and its ensuing definitions and connotations in modern life. In an interview on this project[109] Ruscha mentions: "I went off in the car and I went down to these little towns, to Santa Ana, Downey, places like that. I was exalted at the same time that I was repulsed by the whole thing."[110] This resonates with Denise Scott Brown's visit to Las Vegas: "We rode around from casino to casino dazed by the desert sun and dazzled by the signs, both loving and hating what we saw, we were jolted clear out of our aesthetic skins".[111]

Figure 68. (from left) 12th & Sentous, (southeast corner) Los Angeles, and 1140 E. Pico, Los Angeles, In Real Estate Opportunities (1970) by Edward Ruscha. © Ed Ruscha

Ruscha was photographing things that were not beautiful or interesting in themselves, since they were common and ordinary; however, the methods in which he documented them made them subjects that incited interest, and even excitement. His *Twentysix Gasoline Stations* was the first series of photographs that Ruscha published, the result of the careful editing and curation of multiple photographs. In this work Ruscha photographed a ubiquitous phenomenon that was emerging in his

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[109] Each project by Ruscha is a compilation of approaches, methods and methodologies, and media, employed in order to express a particular idea.

[110] Edward Ruscha, *Leave Any Information at the Signal: Writings, Interviews, Bits, Pages / Ed. Ruscha*, ed. Alexandra Schwartz (Cambridge, MA: MIT Press, 2002), 44.

[111] David B Brownlee, David G De Long, and Kathryn B Hiesinger, *Out of the Ordinary: Robert Venturi Denise Scott Brown and Associates* (Philadelphia: Philadelphia Museum of Art, 2001), 37.

area; the gasoline (petrol) station, a necessity for automobile-focused urban and suburban development, and, as a subject, a nod to the American automobile-centric culture and the repercussions of Route 66 being replaced by the interstate Highway 40. His photographs were informed by an investigation of this automobile architecture becoming part of the landscape, and presented through their framing, the speed and fleeting quality of vision of the automobile culture. A series of different types and styles of gasoline stations in various locations along Route 66 between Los Angeles and Oklahoma are depicted in black-and-white photographs. The photographs, although many were taken from across the road, often give the impression of having been taken through the window of a car as it is driving by, and indeed, many of them are framed intentionally to produce this.[112]

This work had a surprising impact in the arts. After the first publication, critics found them 'curious' and 'perplexing' in their laconic style, believing they would soon be lost in oblivion.[113] On the contrary: the book was published in another two editions, all similarly cheap, mass-produced, and accessible. The result of this success still resonates today, and several artists have paid homage through their own reproductions.[114] Moreover, the work was created during the emergence of Pop art – in Los Angeles, Andy Warhol was exhibiting his paintings of the Campbell Soup cans in the same year that Ruscha's book was published[115] – and in their own way the photographs were another Pop representation of an ordinary subject, repeated. *Twentysix Gasoline Stations* can be seen as a move from the consumerist object to the consumerist space, oftentimes including a consideration of the buildings as products of the modern American lifestyle. This concept applies through the consistent automobile-related views of the urban and suburban environment and is a constant theme throughout Ruscha's photographic compilations published during the '60s and '70s.

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[112] Jaleh Mansoor, "Ed Ruscha's One-Way Street," *October 111* (January 2005): 127–42, https://doi.org/10.1162/0162287053148139.

[113] Heckert and Ruscha, *Ed Ruscha and Some Los Angeles Apartments*, 7.

[114] A few examples include: Jeff Brouws, Twentysix *Abandoned Gasoline Stations*, Eric Tabuchi, *Twentysix Abandoned Gasoline Stations*, Frank Eye, *Twenty-Four Former Filling Stations*, Peter Calvin, *26 Repurposed Gasoline Stations,* as mentioned in Patrizia Di Bello, Colette E Wilson, and Shamoon Zamir, *The Photobook: From Talbot to Ruscha and Beyond* (London: I.B. Tauris, 2012).

[115] Similar to Ruscha's first reception of his *Twentysix Gasoline Stations*, Warhol's exhibition was met with derision that led to lasting fame. Gary Indiana, *Andy Warhol: And the Can That Sold the* World (New York: Basic Books, 2010), 71.

Figure 69. El Paso, Winslow, Arizona. In Twenty-six Gasoline Stations (1963) by Edward Ruscha.[116]
© Ed Ruscha

Ruscha's photographic work, a large part of which was used or referenced by Denise Scott Brown in her own work, shows a specific series of qualities that managed to make his subject matter stand out and bring it to people's attention– in this case architects. One of these qualities is his "deadpan" style of expression that presented the subject through a position of cool indifference.[117] According to Aron Vinegar, the idea of the "deadpan" emerged in nineteenth-century America in literature and the popular arts, such as the theatre; however, it is most often related to the type of humour portrayed in comedy films of the '20s.[118] The actor Buster Keaton is especially famous for the deadpan humour that he communicated through his expressionless and non-reactive appearance, no matter what befell him in the film's narrative. Vinegar explains that through this mode of non-expression the actor becomes the impersonation of scepticism, one which is balanced in a state of inaction. The philosopher Stanley Cavell proposes that the act of scepticism is a state of "acknowledgment" of the situation in which one might find oneself in, therefore bringing attention to that situation with no additional commentary or opinion, but simply acknowledging it.[119]

Ruscha's deadpan style encapsulates this sceptical approach and brings to the viewer's attention to a situation that is generally overlooked, due to its ordinariness. Starting from the gasoline stations and throughout his other published subjects, the deadpan, straightforward style of

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[116] Image taken from Bildersturm blog, https://bildersturm.blog/2019/08/08/ed-ruscha-twentysix-gasoline-stations-self-published-1963/ [Accessed 20 November 2019].

[117] Hal Foster and Mark Francis, "Survey," in *Pop* (London: Phaidon Press, 2011), 36.

[118] Aron Vinegar, "The Melodrama of Expression and Inexpression in the Duck and Decorated Shed," in *Relearning from Las Vegas* (Minneapolis, Minn.: University of Minnesota Press, 2009), 182.

[119] Vinegar, 164.

photography remains constant and shows the subject objectively. However, despite this seeming distancing from the subject, a sense of irony can still be discerned. This emerges through the cropping of the images, the framing that occasionally has an added sense of backstory to it – such as the sense of driving by the scene the photographs of the gasoline stations express – and the other actions Ruscha enacts through the use of perspective, the photographic method, and collage editing. But, most of all, the commentary emerges through the typological subject selected, starting with the question "why would he choose to photograph such an ordinary subject?", leading to "why did he photograph it in such a manner?". Herein, the artist makes a direct commentary on the culture that produced the photographed subjects, and which runs parallel with its contemporary, Pop art; the automobile culture that led to the need for the gasoline stations and a culture of speed correlates with the consumerist culture that led to concepts of the "promotion" and of ownership of real property instead of private property. This irony is used to bring attention to these events that, while considered "ugly", were also part of a subject of interest: the modern lifestyle and its effect on the environment. This approach was also adopted by the New Topographics group: Robert Adams observed: "What I tried to do in *The New West*… was to include the objects we'd brought to the landscape and which by common consent are the most ugly, but also to suggest that light can transform even grotesque, inhuman things into mysteries worthy of attention.".[120] Therefore, in this ugliness of the human-manufactured landscape the artists portrayed the actuality of the situation, saying, "this is what the landscape is" in all its beauty – its ugliness notwithstanding.

In his effort to capture his subjects objectively, while maintaining his position on their meaning, Ruscha enlisted a number of different approaches including much experimentation and unconventional methods of producing images and photographs.[121] In *Royal Road Test* Ruscha was on board a moving car when he decided to throw a typewriter out of it. He then tried to find the remains of the broken typewriter and used his camera to document the found pieces, at the site where they were found, including the car which it was thrown out of; in the book he also shows the typewriter in its original state. Like a crime scene, this project becomes an investigation of what happens to a typewriter when it is thrown out of a moving vehicle. Additionally, it portrays the multiple elements that take place in the ensuing destruction and documentation of the typewriter; the elements being the physical forces of speed and gravity that destroy the typewriter, the element of enquiry that leads the artist to act and document it, and the relationship of the site and the destroyed object that make it a specific and local event. This investigation shows the artist's enquiring position in regard to how both the object and the site are transformed through this act of the typewriter being thrown out of a moving

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[120] Greg Foster-Rice and John Rohrbach, *Reframing the New Topographics* (Chicago: Center for American Places at Columbia College Chicago, 2013), 76.

[121] Some of the most notable moments in his photographic practice include *Royal Road Test* (1967), *Every Building on the Sunset Strip* (1966), and *Thirtyfour Parking Lots* (1967).

vehicle and at the same time the culture in which this event transpires, that is automobile- and speed-centred.

Figure 70. Denise Scott Brown, Learning from Las Vegas studio visit, 1968. View of installing the mechanised camera on the car. (From Martino Stierli, Las Vegas Studio.)

Only a year before this experiment, Ruscha was investigating the automobile culture and signage of Los Angeles, creating one of his most popular works. *Every Building on the Sunset Strip* is a collage of a series of photographs of both elevations of the Sunset Strip published in an accordion-folded book in which, when unfolded, the strip is shown in its entirety, both north and south views printed on 27-feet long paper.[122] To produce the images Ruscha mounted a motorised 35mm camera on the back of a pickup truck; while the truck was being driven on both sides of the road the camera would take consistent photographs of the buildings, storefronts and intersections. Ruscha put the photographs together to create a collage that would show a straightforward view of the two sides of the road, essentially creating a photographic continuity of the road's elevations. His photographs, taken during the middle of the day, present the environment in high contrast and, due to the time and strong daylight, almost deserted. His inspiration and intention of this photographic result were

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[122] Edward Ruscha and Alexandra Schwartz, *Leave Any Information at the Signal: Writings, Interviews, Bits, Pages* (Cambridge, MA: MIT Press, 2004), 84.

Western cowboy films where the towns were just a façade that bordered the main road where all the action took place, and behind which there was nothing.[123]
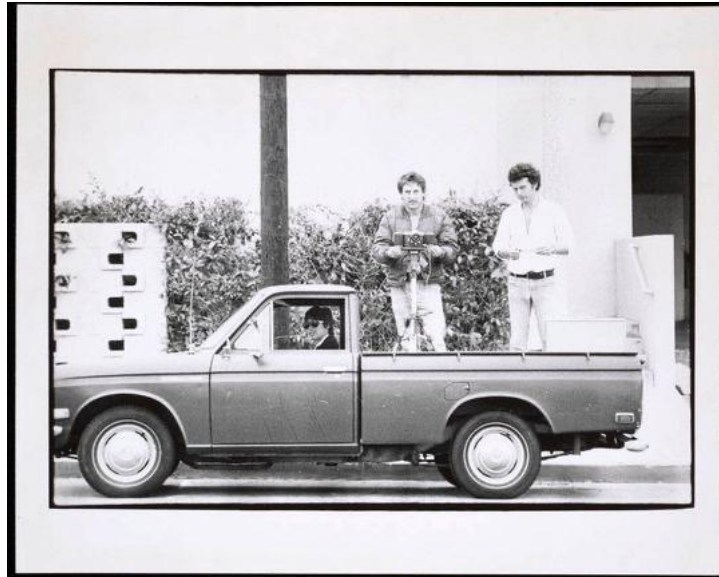
Figure 71. Edward Ruscha (centre) with crew, 1975, Streets of Los Angeles Archive, The Getty Research Institute.

Every Building on the Sunset Strip is one of these pieces of work that combine a number of different techniques and influences and as a result transcends standard definitions. Its production included first using a camera to take stills of the road's elevation views. Ruscha used the negatives, cutting them and painting on them to recreate the elevation views.[124] The techniques and final print link back to film editing and the cinematic perception the viewer has when looking out the window of a moving vehicle driving down the road. All of these approaches, in addition, deal with the spatial quality of the space and its representation in print. Not only is Ruscha commenting on the superficiality of the American strip, through references to film sets of westerns, but he is also attempting to express its temporality and the fleeting views that come with the development of the automobile culture. It becomes, therefore, a paradigm, representing the architectural motif that constitutes the high street.

A large part of Ruscha's work, especially that made during the '60s and '70s, form a photographic investigation of the urban and suburban environment, in particular of Los Angeles. These investigations include temporary events, such as the destroyed typewriter, or ordinary occurrences, as seen in the Sunset Strip elevations. Photographer Sylvia Wolf divides these investigations in two categories: one category is the use of photography as a form of cartographic or

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[123] Ruscha and Schwartz, 43.

[124] Patrick Painter Gallery, "Mike Kelley / Ed Ruscha" (Los Angeles, CA: Patrick Painter Gallery, 1999).

topographic production and the other category is photography as means of documenting actions or performances that are undertaken with the intention of being documented.[125] Each one can be regarded as localised typological research that is underlined by its purpose and cultural background. In *Twentysix Gasoline Stations*, this was the presentation of the gasoline (petrol) station as a landmark in the American landscape and its link to the American automobile culture. Similarly, in *Thirtyfour Parking Lots* Ruscha documented the parking spaces that were strewn about the urban landscape of Los Angeles. The photographs for this project were taken in about an hour and a half, the length of the ride in the helicopter that Ruscha had hired. The aerial photography that Ruscha turned to for this project brings to mind J.B. Jackson's photographic approach that he adopted for his own deciphering of the landscape, and in a similar way brought to light the emergence of "an increasingly prominent feature of the regional landscape".[126] These images showed a side of the city that is almost never visible without the aid of aeroplanes or helicopters, yet is a space of common and continuous use.

Figure 72. (from left) 1555 Artesia Blvd., 6565 Fountain Ave. In Some Los Angeles Apartments (1963) by Ed Ruscha. © Ed Ruscha

Ruscha's photographic methods can be understood from his statement "I think photography is dead as a fine art; its only place is in the commercial world, for technical or information purposes…" and "Photography is just a playground for me".[127] This position allowed him to experiment with all of the ways described above to create images which were not so much concerned with the photograph, but instead focused on the visualisation of the theme. These themes attempted to encapsulate the

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[125] Sylvia Wolf and Whitney Museum of American Art, *Ed Ruscha and Photography* (Göttingen: Steidl, 2004), 111.

[126] Eric Avila, *Popular Culture in the Age of White Flight: Fear and Fantasy in Suburban Los Angeles* (Berkeley: University of California Press, 2006), 172.

[127] Heckert and Ruscha, *Ed Ruscha and Some Los Angeles Apartments*, 8.

environment and present it in the most factual way possible, using straightforward framing. Therefore, the themes generated maps, plans, elevations, typologies, and other architectural strategies of representation. These are undertaken in more depth by the other New Topographics artists,[128] although no one came close to Ruscha's range of methods and subjects. Ruscha documented the ordinary urban and suburban landscape of Los Angeles, including gasoline stations, apartments, storefronts, streets, parking lots, swimming pools, properties, and even palm trees. He brought these everyday things to the attention of the viewer and made them subjects open to investigation. Influenced by popular culture and the everyday, these investigations fuelled further research that led to the influence on, and collaboration with, the architects of *Learning from Las Vegas*. Through his photography, Ruscha demonstrated a strong spatial and architectural consideration of how to view the spaces he depicted and most importantly the underlying influences that led to their development and defined them in these overlooked yet substantially compelling spaces.

Figure 73. View of the unfolding of Every Building on the Sunset strip (1966) by Edward Ruscha.

Stephen Shore: Seeing the extra- in the ordinary

Stephen Shore's participation in "The New Topographics" signified a key moment in photography's development, for an entirely different reason. Shore's photographs of his interstate travels were in colour, standing out amongst the other black-and-white photographs. It is unclear how exactly his participation in the exhibition came about, although there are mentions of his affiliation with Nicholas Nixon and his work being known to Jenkins through other galleries.[129] Like Ed Ruscha, Stephen

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[128] Sichel, "Deadpan Geometries: Mapping, Aerial Photography, and the American Landscape.", 104.

[129] Adams et al., *New Topographics: Photographs of a Man-Altered Landscape*, 48.

Shore's work was greatly influenced by the contemporary subjects of Pop art and the direction of landscape photography, demonstrating a critical eye on the contemporary period and developments and a predilection for testing the definition of art and how people see the world. Unlike Ruscha, however, Shore was first and foremost a photographer and approached the use of the camera and the photograph as a photographic artist of his standing would. In the "New Topographics" exhibition Shore's photographs were not only striking for their colour format but presented an invested interest in the construction of the photograph, as a subject, an image, and an object.

Stephen Shore, born in New York in 1947, became interested in photography at an early age, and was given his first camera when he was six years old. By the age of fourteen he had sold his first photographs to the curator of photography at the Museum of Modern Art in New York, Edward Steichen. A few years later Shore became also interested in film, eventually coming across Andy Warhol, who became something close to a mentor for him. Shore was only seventeen when he started spending time at Warhol's Factory, where he often would interact with the other artists and document them through his photographs.[130] His early exposure to the world of photography and art shaped Shore as an artist that would see the world through his camera in a way that was quite controversial at the time he was practising.

Figure 74. Excerpt from American Surfaces (1972-73) by Stephen Shore. From Nighthawknyc (blog)

It was in the late 1960s when Shore began travelling between the East and West coast of America to visit friends in Amarillo, Texas. While Ruscha was creating his photographic books, Shore was just beginning one of his largest projects. In 1972 Shore set off on his first road trip across

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[130] Anna Stathaki, "Stephen Shore Interview," *Wallpaper**, July 2007, http://www.wallpaper.com/art/Stephen-Shore-interview/1610.

different states, following the popular Route 66 motorway that connected the East coast to the West, and which many American holidaymakers would take on their way to Los Angeles.[131] He spent a month travelling, visiting city by city, photographing everything he saw and did, creating a photographic diary of his experience. Shore would later describe his project as "… a couple of things at the same time. One was an idea of doing a diary but out of repeated subjects, so it wasn't strictly conceptual, but I photographed every meal, every bed, every television set, every person I encountered. But I had other interests as well, which was I wanted to take a picture that felt natural, that felt like seeing and didn't feel like picture-making".[132] Every meal he ate, every bed he slept in, every toilet he used and everything he came across during his month-long trip, was used to produce his famous photographic series *American Surfaces*.[133] The camera he used was a simple Rollei 35, which was similar to today's point-and-shoot cameras, with a 35mm colour film. The ease of use of this camera allowed him to take hundreds of photographs of every and any situation, object, space, or person.[134] The result was a large collection of colour snapshots that at first glance looked as if they had been taken by an amateur, due to the quality of the equipment used.

American Surfaces, a series of 312 colour snapshots, was exhibited in 1972 in the back room of the Light Gallery in New York. The photographs were arranged in a grid on the walls and featured various moments and things Shore had encountered on his road trip, including various shop windows, cars, people he met, places he stayed at, toilets he used, the food he ate and many other various things. Shore's use of the snapshot was intended to give a natural depiction of these moments. Shore states: "… I wanted to take pictures that felt natural. I think everyone is familiar with the fact that they often write in a different way than they speak, and that their writing can sometimes seem more stilted, and even use a different vocabulary. And I wanted pictures that felt as natural as speaking".[135] The result is a very large series of "snapshots" that represent "landscapes of the commonplace, the banal, the presumed unaesthetic – all in (their true) colours"[136] and what curator Marta Dahó identifies as the perfect American normality of the time.[137] The project, while defined as a photo-diary, can be better considered as a collection of the unremarkable and the everyday. Curator Quentin Bajac mentions in

[131] Stephen Shore, *A Road Trip Journal* (London: Phaidon Press, 2008).

[132] Alec Soth, 'A Conversation with Stephen Shore', *Financial Times*, 10 May 2019, https://www.ft.com/content/e81096de-726b-11e9-bf5c-6eeb837566c5.

[133] Stephen Shore, *American Surfaces* (London: Phaidon Press, 2008).

[134] The use of these cameras also represents their broader cultural use which is evidenced in the Learning from Las Vegas studio trip. Their format and ease of use can be considered a defining component in the spread of photography and visual culture following the '60s, which today has become even further embedded through the integration of cameras on mobile phones and other everyday devices. Stephen Shore's work appears to be an early critique of this phenomenon and the viewer's ensuing response to their environment.

[135] Alice Morin, "Stephen Shore, Museum of Modern Art. November 19, 2017 - May 28, 2018.," *Transantlantica*, no. 1 (2017), http://journals.openedition.org/transantlantica/8533.

[136] Daniel Huber, "Walker Evans and Stephen Shore at the Rencontres de La Photographie d'Arles 2015," *Miranda*, no. 12 (2016), http://journals.openedition.org/miranda/8411.

[137] Stephen Shore et al., *Stephen Shore: Survey* (New York: Aperture, 2014), 15.

his description of the project that through these photographs Shore expressed a Conceptual practice that linked to Warhol's references to industry and Pop culture, as well as to Ruscha's systematic methodology, and a fascination with amateur photography, including vernacular photography, greatly influenced by Walker Evans.[138]

Figure 75. Stephen Shore, Merced River, Yosemite National Park, California, August 13, 1979, chromogenic colour print, 91.1 x 114.1 cm., (The Museum of Modern Art, New York). © Stephen Shore. All rights reserved.

The photographer and photojournalist Walker Evans is known for his photography of the American Depression in the 1930s and 40s. He was the first photographer to have a solo exhibition at the Museum of Modern Art in New York, *Walker Evans: American Photographs*. It presented 100 photographs that portrayed the American society and culture through portraits and architectural landscapes.[139] The photographs were all linked through their structure and subject and elided any form

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[138] Stephen Shore et al., *Stephen Shore: Solving Pictures*, ed. Quentin Bajac (London: Thames & Hudson, 2017).

[139] Walker Evans, Maria Morris Hambourg, and Metropolitan Museum of Art, *Walker Evans* (Princeton, N.J.: Princeton University Press, 2004), 99.

of narrative. They represented the American vernacular of the '30s in all its facets, announcing Evans as a master of vernacular photography and establishing him as an artist. The curator of the 2017 retrospective exhibition at the San Francisco Museum of Modern Art, Clément Chéroux, defined "the vernacular" as a subject that is the diametrical opposite of art, pointing out Evans' unique contribution to artistic photography of that time.[140] He continued by suggesting that the vernacular is something local, leading to that which identifies a specific area, or in this case culture, and positioning documentary photography as a specific subcategory of vernacular photography. Chéroux analyses Evans' work in two parts, one where the vernacular is used as a subject, and one where it becomes a method that links back to other documentary photographers such as Eugène Atget and August Sander, who were practising photography at a time when it was yet to be considered an art form. In the same way that these photographers were the precursors of photography as an art form, Evans becomes the precursor of the ordinary becoming art, which was to emerge in the Pop art movement a few years later.[141]

It is clear that Shore was much influenced by Evans, in particular Evans' photographic method and subject-matter, and applied it in producing a documentation of the new America of the 1960s. However, Shore's attempt at using the concept of the vernacular was not as well received as Evans' was. The reviews were negative, to say the least – Bajac used the word "excoriating" to describe Shore's reception, while other reviewers called them "junk photographs" and "thin, benumbing and banal" to express the impression the work left on them.[142] Shore used colour photography as a means of furthering the vernacular by relating it to the commonly produced amateur photographs taken by non-photographers and tourists, or as seen on postcards.[143] This reference, though, is only the surface of Shore's intention: Bajac mentions the fact that colour was a contemporary technology that was an accessible option, but most interestingly analyses his use of colour as a means to remove the communication of emotion – in this case wonder and nostalgia. The vernacular documentations by Rudofsky and Pagano engaged with emotional expression that came with the black-and-white depictions, yet here Shore removed himself from such complications by simply using colour.

Colour, however, posed other possibilities that Shore went on to explore in his photographs. In both *American Surfaces* and his following series *Uncommon Places*, Shore manipulated the colours

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[140] Sarah M. Miller, "Walker Evans, Hero of the Vernacular Style," *Aperture* (blog), 2018, https://aperture.org/blog/walker-evans-hero-vernacular/.

[141] Clément Chéroux, Centre Pompidou, and San Francisco Museum of Modern Art, *Walker Evans* (Munich: DelMonico Books, Prestel, 2017).

[142] Shore et al., *Stephen Shore: Solving Pictures*, Gene Thornton, 'From Fine Art to Plain Junk', *The New York Times*, 14 November 1971, sec. D.; Allan Douglass Coleman, "American Yawn, Irish Wail," *The Village Voice*, October 1972, http://stephenshore.net/press/VillageVoice_Oct_72.pdf.

[143] Rong Jiang, "An Interview with Stephen Shore – 'The Apparent Is the Bridge to the Real,'" *ASX* (January 2007), https://americansuburbx.com/2012/01/interview-stephen-shore-the-apparent-is-the-bridge-to-the-real-2007.html.

in their contrast and vibrancy, occasionally muting them to make them even less expressive, "bland and unemphatic".[144] His use of colour positioned Shore as one of the primary representatives of the New Color Photography in America, a movement that included among others William Eggleston and Joel Sternfeld. Unlike these photographers, Shore printed his colour photographs in such a way that the photograph's image transcended the paper medium and instead of "seeing the images, we are seeing through them".[145] His colour photographs had an even wider impact in the development of artistic photography through his relationship with Bernd and Hilla Becher. After their introduction in the United States the Bechers asked to exchange photographs with Shore. Among the images exchanged, "La Brea Avenue and Beverly Boulevard, Los Angeles, CA, June 21, 1975",[146] part of Shore's *Uncommon Places* series, was one that had a considerable effect. Despite their consistent use of black-and-white photography, the Bechers, through their teaching and relationship with Shore, passed on the technique of colour photography to their students. From this small exchange, their students began experimenting with colour, and some of them, including Candida Höfer, Thomas Struth and Andreas Gursky, have become renowned colour photographers.[147] Shore's participation in the "New Topographics" exhibition resulted in his influence on the direction of the Düsseldorf School of Photography through his vernacular approach to landscape photography and his attempt to produce an objectiveness expressed, controversially, through colour.

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[144] Gene Thornton, 'Formalists Who Flirt With Banality', *The New York Times*, 14 November 1976.

[145] Shore et al., *Stephen Shore: Solving Pictures*.

[146] Markus Schaden et al., *The Lea Brea Matrix - Extendes Version, Learning from Las Vegas, Stephen Shore and Six German Photographers, Studio LA-X* (Cologne: Dortmund Verlag Kettler, 2014).

[147] Adams et al., *New Topographics: Photographs of a Man-Altered Landscape*, 47.

Figure 76. (Both photos) Stephen Shore, La Brea Avenue and Beverly Boulevard, Los Angeles, June 21, 1975, chromogenic colour print, 43.2 x 55.2 cm, (The Museum of Modern Art, New York). © Stephen Shore. All rights reserved.

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Shore's *Uncommon Places* began in 1973, following the critical reception of *American Surfaces*. The "candid camera" approach was one of the main issues mentioned in critiques of *American Surfaces*, so Shore attempted to revisit the project with better equipment, this time with an 8'x10' camera. However, the larger equipment, and the complexity of its use, resulted in a very different photographic experience, and therefore a different quality of images. The more limited use of the larger-size film made Shore more selective in his shots, while the weight of the camera and the required tripod did not allow for the snapshot approach but required the view to be framed carefully in advance. Moreover, the higher quality of the film meant it was developed in higher definition and showed a greater depth of detail than the previous 35mm film. Shore discovered that he could create more complex compositions, taking advantage of the time it took to set up and the higher definition, composing images that could be "read" and explored by the viewer at length. The new series that emerged from this discovery featured again close-ups, interiors, portraits, urban landscapes, buildings, and other American landscape scenarios.[148]

"Shore incessantly concentrated on what role the camera plays in transforming the world into images and what the conditions and effects are of this mediation (cf. his book *The Nature of Photographs*). His early photographs show the impact of serial thinking, conceptual art and variation".[149]Unlike Ruscha, Shore used photography not merely as a tool, but as an expressive mechanism to answer questions; in his first series this was about what contemporary America was, while in the second it focused on unearthing the uncommonness of the common. Despite the second series being a natural development of the first, there is a distinct difference in terms of the dynamism and impact of the photographs, that was an immediate result of the camera used and the methods applied to take these images. *Uncommon Places* presents a deeper analysis of the subject underlying the image, and there is a very distinct intention, similar to any researcher's investigation, to attempt to answer the conundrum that the place being photographed evokes. In his famous "La Brea" photographs, Shore creates layered urban constructs that, while very common and everyday, manage to portray an intentional architectural structure through the arrangement of the petrol stations, cars, traffic lights and signs. In two photographs, each taken a day apart, he presents the same place through very different views, one dynamic and noisy, another static and monumental.[150] These different representations of the same subject are expressed in his statement: "it is the quality of

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[148] Stephen Shore and Stephan Schmidt-Wulffen, *Stephen Shore: Uncommon Places; The Complete Works* (New York: Aperture, 2015).

[149] Huber, "Walker Evans and Stephen Shore at the Rencontres de La Photographie d'Arles 2015."

[150] Schaden et al., *The Lea Brea Matrix - Extendes Version, Learning from Las Vegas, Stephen Shore and Six German Photographers, Studio LA-X.*

attention that may make [these subjects] uncommon"[151] making his photography a medium for seeing different versions of the same subject or presenting the underlying layers of the landscape that unfurl in front of the viewer.

Shore's role in the exhibition organised by Venturi, Scott Brown and Izenour presents another facet of the photographer's interest in experimenting with different variations of objectivity, reality, and ways of seeing. For one thing, Shore showed great interest in giving his photographs "a deadpan quality"[152] that resonated with the architect's research approach. In *Uncommon Places* Shore applies this approach to critically explore his subjects with an interest in the layers and surfaces that composed his images. This shared interest led to the collaboration in the exhibition "Signs of Life: Symbols in the American City" in which Shore experimented with various photographic forms. His work here was an exploration of photographic applications and constitutes one of the seminal moments in his career. Shore was shaping his own approach towards architecture and questioning what architecture was and what it was becoming through the photographic medium. In a 1977 paper he mentions a note in correspondence between the photographer Paul Strand and a friend in 1953, saying that "Luzzara was a difficult place to photograph because it had 'no buildings of architectural interest'." He continues analysing this phrase and results in his comment that "… dating from the early days of photography, there was a different, more topographic photographic approach to architecture. In this tradition, the built environment was photographed as a record of what a place looked like. Underlying this was the understanding of architecture as a visible face of forces shaping a culture".[153] In this exhibition, Shore is seen for a rare moment applying his photographic skill in a very immediate architectural investigation; however, it goes beyond being another commission, bringing his investigative photographs back to his series *Uncommon Places*.[154]

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[151] Kenneth Baker, "Wave of Attention Rushes Back to Stephen Shore's Photogrpahy," *San Francisco Chronicle*, May 2004.

[152] James Collins, "Stephen Shore, Light Gallery," *Artforum* 12, no. 6 (1974), 76.

[153] Stephen Shore, "Photography and Architecture, 1977," in *Stephen Shore* (London; New York: Phaidon Press, 2007), 138.

[154] Shore et al., *Stephen Shore: Solving Pictures*.

Figure 77. Stephen Shore, Fifth Street and Broadway, Eureka, California, September 2, 1974, chromogenic colour print, 44.77 x 56.2 cm., (from Stephen Shore, Uncommon Places, 1982). © Stephen Shore. All rights reserved.

Figure 78. Stephen Shore, Sha-Mar Beauty Salon, Chestnut Street, Harrisburg, Pennsylvania, July 4, chromogenic colour print, 44.77 x 56.2 cm., (from Stephen Shore, Uncommon Places, 1982). © Stephen Shore. All rights reserved.

Conclusion: Photography, the ordinary, and architecture

The camera thus played a significant role in considerations of the vernacular in the '60s, affecting the role of artistic photography by signalling the end of the modern approach and marking the beginning of a wider disciplinary approach for architecture. In part it is an extension of the investigations seen in the previous chapter, a connection that is clearly made between Bechers' *Anonymous Architectures* and Rudofsky's "Architecture without Architects". The scope of "seeing", in this case, however, is wider, with deeper connections to the societal and cultural changes taking place due to the increased use of the hand-held camera and the snapshot, and a broader awareness of the changing landscape. The photograph becomes more accessible, in terms of both producing it and viewing it. The printed image is seen to have particular importance through exhibitions and publications in the changing perception of the definition of "the vernacular", producing a discussion that is not limited to a particular field or group of people. While architects saw the vernacular as a non-pedigreed, almost savage type of "architecture", artists saw it as an extension of the everyday, ordinary environment that

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surrounded them. But what they saw and what was represented as ordinary was not always the true nature of the ordinary. A proclivity for the ideal and what they chose to find as interesting led both architects and photographers to selectively edit and skew the image of the vernacular and the ordinary. In this climate of biased misrepresentation architects and artists began to question the definition of the vernacular and investigate its multi-layered meanings.

In Rudofsky's paradigmatic work, photography became a mechanism that communicated objective and detached information. He employed photography as a means to "collect" and bring together distant places, positioning them at the centre of an architectural discourse. His use of photographs questioned, both intellectually and experientially, the direction in which modern architecture was travelling, and the architect's role in portraying a subject that was approachable and relevant to all, the vernacular. This methodological approach soon grew into an architectural research practice method in *Learning from Las Vegas*, representing the cultural changes taking place through the growing use of the camera and architects' enquiring position within the changing landscape of that period, simultaneously expanding the boundaries of what is considered "valuable", worth paying attention to and worthy of academic research. Thus, the vernacular became an entry point: architects could engage with it photographically, influencing their mode of questioning and interdisciplinary scope.

Through the transition from Group f/64 to the New Topographics movement, the "ordinary" was transformed from an idealised representation of the cultural and natural landscape to a realistic representation of its state. This shift in "seeing" changes not only the subject matter and its portrayal, but also the disciplinary role of photography, making it into a more critical and polemical investigation and discussion, in parallel with developments in Conceptual and Pop art in a time of technological, societal, and cultural change. Ed Ruscha's contribution to this drastically changed how photography could be applied and introduced new ways of photographing and representing landscapes of the everyday. His approach turned the mundane into a deep and multi-layered source of enquiry, forgoing the strict rules of professional photography and focusing on how seeing and representation could uncover interesting subjects underlying these seemingly unremarkable subjects. Through his photographic series and visual constructs Ruscha bridged social and cultural issues with the architectural landscape, presenting how this vernacular landscape was created as a result of these issues. Stephen Shore approached this subject from a photographer's perspective and made the ordinary not only a subject to be photographed but a methodology of investigation. In his two photographic series the viewer learns through the artist's gradually developing inquisitiveness what the ordinary is, how it can be documented with its definition intact and eventually uncover the elements that compose this "ordinary" setting.

Through Rudofsky's groundwork these two photographers' work had the opportunity to enter architectural discourse, influencing the seminal work conducted by architects Robert Venturi, Denise Scott Brown, and Steven Izenour. Scott Brown's distinct perspective blended architecture, art, and

photography through theory and practice. The project copied, re-enacted, and explored Ruscha's methods and methodologies, making them part of architectural research. There is little difference in what Ruscha was looking into when he created his work and what Scott Brown was exploring when she applied his photography in her research beyond the fact that it was followed by more extensive textual and supporting material to clarify the findings. Shore's work was applied in a much later stage of the research through their collaboration, yet his work constitutes a further step towards understanding how photography can become a methodology of seeing the everyday through a critical lens.

Two different approaches on one significant subject, the vernacular investigation of the 1970s proved not only to be fundamentally linked to the photographic practice for the identification and documentation of this architectural motif but also to have had a significant influence on the direction of the architectural discipline in the following years. The research shows that while the photographic approach does indeed have elements of some architectural understanding, artistic and photographic practice develops and then communicates back to architecture a new way of understanding space. Venturi and Scott Brown note, in *Learning from Las Vegas*: *"How do you differentiate on a plan between form that is to be specifically built as shown and that which is, within constraints, allowed to happen? How do you show fluxes and flows, or seasonal variation, or change with time?..."*.[155] The architects found the answers to these questions in the work of Ed Ruscha and Stephen Shore, who in their own ways found a means to analyse and express space and the architectural landscape. Their contribution was both a new "way of seeing" and understanding of space, but also introduced the advantages of trans-disciplinary research that, through *Learning from Las Vegas* became a paradigmatic mode of architectural education.

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[155] Scott Brown and Venturi, *Learning from Las Vegas,* 76.

Space of Absence

Introduction

Throughout architectural history and theory the presence of the human being as a subject, and its relation to the design, construction, and use of architecture, is deeply felt, whether directly or indirectly. The fluctuating centrality of the human being's role in architecture has, even more so, created engaging and fruitful outcomes, whether through research, critical projects, or debates.[1] Unlike other theories,[2] however, discussions of the various facets of the relation between human beings and architecture seem to lack a clear terminology with which to describe it as a whole. In some cases, terms such as "social architecture" and "social space" are used to discuss the interaction between the subject and space.[3] In others, degrees of humanism are used to describe how closely, or far apart, architecture lies from considering the human being as its central subject.[4] Even in cases of "non-human"-centred architecture, a relation to the human being is used to signify its positioning.[5] In this chapter this relation will be undertaken through the term "absence", its definition here being used as a relative state that acts as a contrast, allowing different values to emerge through the detraction of another, and on occasion as a controversial approach to remind us of that which is absent.

The chapter will approach the subject of architecture as the design of space for, but most importantly, around, people. It concerns itself with the creation and design of spaces that are

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[1] Centrality meaning both the subject's authority, but also the parts of its aspects being considered, for the human being may refer, among other notions, to the body, the mind, and its relation to others through its social and political aspects. Examples of its variations may be found in different movements and critiques, as described in Anthony Vidler, 'Architecture and the Enlightenment', in *The Cambridge Companion to the French Enlightenment* (New York: Cambridge University Press, 2014), 184–98, K. Michael Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer* (Cambridge, MA: MIT Press, 1995), Geoffrey Scott, *The Architecture of Humanism: A Study in the History of Taste* (London: Constable, 1914).

[2] For example, theories on typology and the vernacular, seen in previous chapters.

[3] Doina Petrescu and Kim Trogal, *The Social (Re)Production of Architecture: Politics, Values and Actions in Contemporary Practice* (London; New York: Routledge, 2017), Ákos Moravánszky, Judith Hopfengärtner, and Karl Kegler, *Re-Humanizing Architecture: New Forms of Community, 1950-1970* (Basel/Berlin/Boston, MA: Birkhäuser, 2016).

[4] Paul Volsik, 'The "Inhumanity" of Modernism?', in *L'Inhumain* (Paris: Presses Sorbonne Nouvelle, 2004), https://books.openedition.org/psn/4459?lang=en.

[5] Graham Harman, *Object-Oriented Ontology: A New Theory of Everything* (London: Pelican, 2018). Here, Harman critiques the post-Kantian anthropocentric position, proposing instead a speculative reality that is independent of the human subject.

intentionally and directly conceptualised to include, or occasionally exclude, the human presence, and where "hospitable", "inviting", and "accommodating" are used to describe these intentions and their eventual spaces. However, the "creation" of space is heavily reliant here on what that space "contains", the human aspect being the main principle that distinguishes these architectural spaces and their design. The notion of the human *presence* in space, as opposed to the reference to the human *person*, should be clarified by the distinguishing the human as a combination of time, movement, and social entity from an object with metric dimensions which might be encountered in architectural drawings. For this reason, the case studies here are selected for their observational methods and their relation to the human aspect of architecture in terms of passage, circulation, and the creation of narrative. They are all linked, in one way or another, to photography and challenge the observational skills of the viewer through the contradiction between presence and absence.

Social Space

The concept that space may be produced, as opposed to being found, poses the necessity for an agency, one which architecture may very well be ideally placed to take on, but which at the same time does not exclude other possibilities. As an idea, the production of space has been expressed by various spatial disciplines, including geography, ethnography, and sociology, its main ambassador being the philosopher Henri Lefebvre, in his book *The Production of Space* (1974), a dialectic on society, everyday life, and the relationship between humans, as social beings, and space. In this work, Lefebvre looks for the "code" that leads to the construction of space and focuses strongly on the fact that the definition of space is by and large reliant on its social aspect, whether this is political, cultural, or simply emotional.[6] Space is defined by social relations, "concrete abstractions, [that] have not real existence save in and through space".[7]

The relationship between the social and space is epitomised in Georg Simmel's analysis of urban sociology in the article "The Sociology of Space" (1903),[8] and further expanded in the context

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[6] Lefebvre acknowledges three manifestations of space: "spatial practice" (perceived), "representations of space" (conceptualised), and "representational spaces" (lived). Lefebvre, Henri. *The Production of Space*. Malden, MA: Blackwell, 2016, 38-39.

[7] Lefebvre, 404.

[8] Georg Simmel, 'The Sociology of Space (1903)', in *Simmel on Culture - Selected Writings*, ed. David Frisby and Mike Featherstone (London: SAGE Publications, 1997), 137–70.
The article was revised and expanded as "The Social Boundary*", "The Sociology of the Senses"* and "The Stranger" in Georg Simmel, *Soziologie: Untersuchungen Über Die Formen Der Vergesellschaftung* [1908] (Berlin: Duncker & Humblot, 1958); Georg Simmel, *Sociology: Inquiries into the Construction of Social Forms*, ed. Anthony J Blasi, Anton K Jacobs, and Mathew J. Kanjirathinkal (Leiden; Boston, MA: Brill, 2009).

of the developing urban life in "The Metropolis and Mental Life" (1903).[9] Simmel investigates the relevance of space to the social structure and the effect it has on both social interactions and dynamics. According to him, occupied space is a social space. Spatial boundaries frame social boundaries that function as configurations that define participation and communication for the people situated in the space. Furthermore, social interaction in and of itself can create space by distinguishing between different types of social organisation, which then leads to the creation of buildings, districts and other categories of spatial organisation based on different social interactions.

Social space, therefore, suggests an architecture designed around a sociological context. In this context, architecture is the physical form of society, a Gestalt that resonates with the various social forms. On this notion, Walter Benjamin proposed through his writings how people can be situated in society with the aid of architecture.[10] A member of the Frankfurt School and inspired by Simmel's work, Benjamin explored the role of architecture in modern society in conjunction with studies of art, film, and literature, as products and definitions of society. Benjamin followed Simmel by referencing Kant, in particular his writings on experience,[11] and attempted to show that urban space, being a disambiguation of social space, is an ephemeral and individual subjectification, resonating with the modern lifestyle. Eventually he challenged Kant's transcendental philosophy, pointing out that his theories resonate more clearly in the context of the Enlightenment than that of his own modern era.[12] Benjamin's departure from Kant resulted in the *Arcades Project* (1927-1940): this is not only a critique of modern society, but also a sociological, cultural, and historical chronicle of modern society's translation into an architectural space.

These interdisciplinary approaches to space and its social associations have been a constant subject of debate in architecture since Modernism. The emergence of the "object" and the "subject", and the connotations that follow them,[13] in the wider context of modern society, questioned the position of humanity in the physical world and how space could conform to this emerging situation. Michael Hays positions this subject by considering the modern definition of "humanism" and his own interpretation of post-humanist thought. According to Hays, Modern humanist architecture was designed to accommodate the booming economy and the needs of the emerging bourgeoisie,

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[9] Georg Simmel, 'The Metropolis and Mental Life', in *The Sociology Of Georg Simmel*, ed. Kurt H. Wolff (New York: Free Press, 1950).

[10] Walter Benjamin and Howard Eiland, *The Arcades Project* (Cambridge, MA: The Belknap Press of Harvard University Press, 2003).

[11] Immanuel Kant, *The Critique of Pure Reason* [1781] (Copenhagen: Cosmopolitan, 2018).

[12] Kevin MacLaughlin, *Benjamin Now: Critical Encounters with* The Arcades Project (Durnham, NC: Duke University Press, 2003).

[13] In Modernism, "object" is considered the "analysis of the historical origins of things and events themselves" and "subject: an analysis of the more intangible and shifting historicity of the concepts and categories by which we attempt to understand objects and events.". K. Michael Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer* (PhD thesis, Department of Architecture, Massachusetts Institute of Technology, 1990). Retrieved from https://core.ac.uk/download/4431186.pdf.

simultaneously "disenfranchising the autonomous individualism".[14] Resonating with Benjamin's position on modern culture and society, Hays argues that Modernism subverts the individual role of the "subject" (in this case the human) and defines it through its social practice. The "object" is separated here from the subject and is, as Hays puts it, "seen as having a material existence independent of, and at times threatening to, the unity of the individual self".[15]

The emerging consumerism and cultural lifestyle of the spectacle in modern society assert this gap between the object and the subject. The avant-garde, hallmark of Modernism and promoter of social reforms, probed the foundations of this structure. The rift between modern culture and humanity, between rationality and subjectivity, was intended to be an answer to the social and psychological issues that followed the two World Wars. The avant-garde questioned this dichotomy and presented what results from this dehumanisation of the new reality.[16] In this context, Siegfried Giedion engages with the reconciliation of the rift through the sense of sight. In *Space, Time and Architecture* (1941), he proposes the use of visual language as a method to create experiences and therefore integrate the semiotic element of the surrounding environment to that of the human experience: "This disastrous rift between thinking and feeling now has to be overcome".[17]

The issues that occupied the Modernists in the late 1900s and early 2000s are equally relevant today in the form of technological predominance, urbanisation and social investigations. The position of the human presence in space is largely determined here by social forms that play a significant role in the design of architecture: a distinct example would be Louis I. Kahn's design approach, that aimed towards the encouragement of socialisation by arranging the plan as a "society of rooms".[18] The interior space then becomes the focal point of architectural design and the interior experience its defining element. However, this approach to designing architectural space through a consideration of space as both a material construct and as a space for habitation was divided following the Modernist movement. Architecture began to focus more on the constructional enclosure of space, which Kenneth Frampton names "tectonic culture",[19] diverging from the arrangement of spaces and instead leading to an obsession with the structure. This has only been exacerbated since that time, losing the Modern

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[14] K. Michael Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer* (Cambridge, MA: MIT Press, 1995), 5.

[15] Hays, 5.

[16] Lawrence S Rainey, *Institutions of Modernism: Literary Elites and Public Culture* (New Haven, CT; London: Yale University Press, 1998), 30.

[17] Siegfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (London: Harvard University Press, 2008), 559.

[18] Alessandra Latour, "Louis Kahn, 'I Love Beginnings' [1972]," in *Louis I. Kahn: Writings, Lectures, Interviews* (New York: Rizzoli, 1991), 291.

[19] Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture,* ed. John Cava (Cambridge, MA: MIT Press, 1995).

dialogue between the subject and the object that produced social space and thus turning towards an architecture of objectified exteriors.[20]

Here, the distinction between interior and exterior spaces will be employed, for the most part, as a clearer boundary of what is considered space without going further into defining where one space ends and the next begins, how the fluidity of these boundaries can be in flux based on changing social relations. Instead, the chapter will focus more on the "production" of space, returning to Lefebvre's work, and its dual approach informed by Hegel, on one hand, and Marx and Engels on the other;[21] the concept which creates and the action that produces.[22] While *The Production of Space* was a theoretical project that explored the nature of space, another project, in this case by the urbanist and sociologist William H. Whyte, approaches this investigation from a more naturalistic direction. In his work *The Social Life of Small Urban Spaces* (1980), Whyte acknowledges, through his title, Lefebvre's definition of space and goes on to document and observe this theory in action.

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[20] Robert McCarter, *The Space within: Interior Experience as the Origin of Architecture* (London: Reaktion Books, 2017), 25.

[21] Hegel plays a particular role in Lefebvre's formulation of society, cognition, and the dialectic. In *Hegel, Marx, Nietzsche, or, The Realm of Shadows* (1975) Lefebvre balances Hegel's way of thinking, associated with the French Revolution, with more recent concepts by Marx and Nietzsche to arrive to his own understanding of modern society.

[22] Hegel's definition of space follows a more abstract and conceptual approach as an "absolute" idea of "production" through deductive reasoning from the general (world) to the specific (the human being and their products of history, knowledge and self-consciousness) that Marx later develops via the concept of labour and capital into space of production through action.

The Social Life of Small Urban Spaces
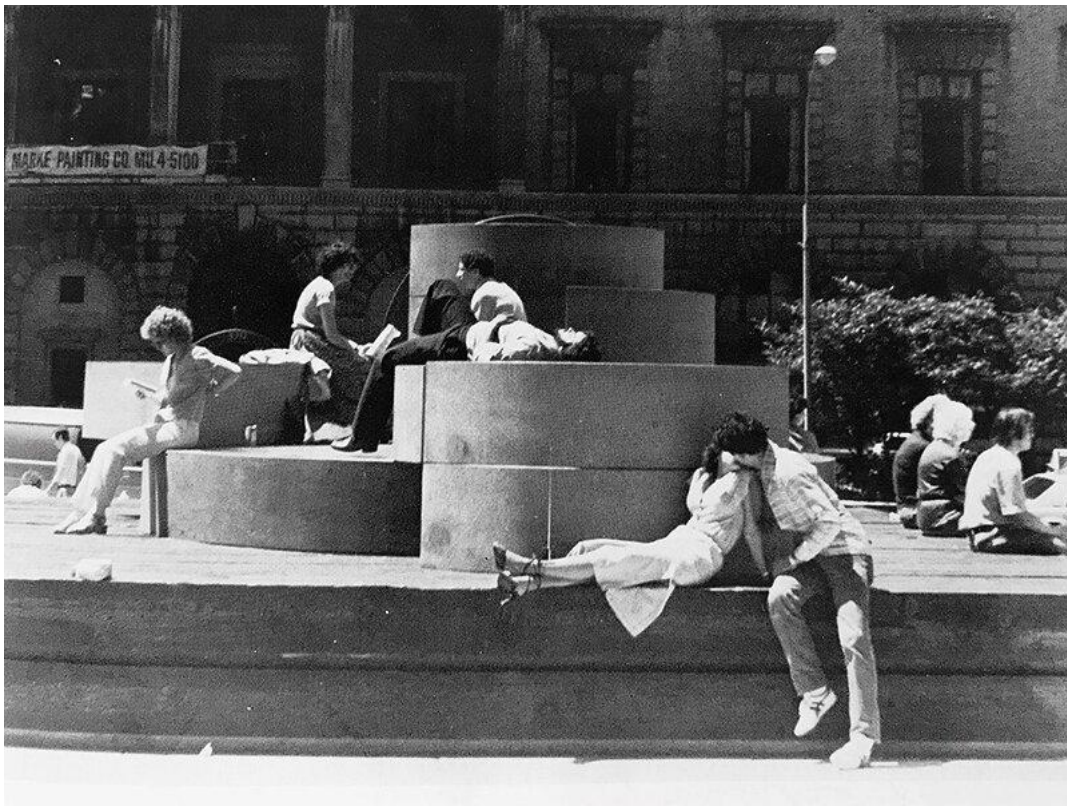
Figure 79. William Whyte, "a useful sculpture exhibit at Seagram's Plaza", photograph by either Whyte or a member of The Street Life Project (1971-1980), published in The Social Life of Small Urban Spaces, 1980.

The Social Life of Small Urban Spaces[23] is a project that is positioned within a broader spectrum of urban investigation. It began in 1971 with The Street Life Project and has since then established a new approach to studying urban design. It started as a project to study spaces, mostly public, outdoor spaces, but later on also looked at indoor spaces. It has attracted attention predominantly for its methods of observation. Whyte, who, as well as identifying himself as an urbanist, sociologist and journalist, also called himself a "people-watcher", employs the latter as his main form of investigation and documentation. The book, which is also a film, follows Whyte's narration of what he observes in different public spaces in New York: what is there, who is there, what they are doing, with a description of events like the voice-over in wildlife documentaries. The project is accompanied by video and audio documentation, which resulted in making the film, photographs, drawings, and Whyte's commentary. The work is systematically organised into various themes that are grouped

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[23] William Hollingsworth Whyte and Project for Public Spaces, *The Social Life of Small Urban Spaces* (New York: Project for Public Spaces, 2018).

either by the type of space, the action performed in the space, or the conditions. As categories, they stand on their own, areas that can be explored further and broken down into smaller "sections", as chapters in the book; however, they show that this is the result of an initial study, with no specific conclusions but pure observation, that allows the questions that arise through the study to be interpreted by the reader. Despite this, there is a main finding that comes from this study, which positions it as a seminal project in the realm of spatial studies, and this is that there is much to be learned through observation.

Following the previous project, "Learning from Las Vegas", it seems that, in architecture, there is significant potential for learning from our surroundings, the everyday and the banal. While "Learning from Las Vegas" approached space from a specific cultural and representational aspect, Whyte goes further back to more basic and fundamental notions, such as the act of sitting or serving food in a certain space. These primary functions that the unseen observer follows transform the people who are being observed into something other, creating a distance between observer and observed and allowing for a measure of objectivity and a fresh view on things that even the observer experiences every day without a second thought. Now the act of sitting, for example, becomes more than a movement: it is an act that has social and spatial effects. Observing this, not only does Whyte see how well, or otherwise, the space accomplishes its role – he also discovers how, even in the most poorly designed situations (or, on occasion, regardless of the intention of the design, people apply their own authority and create or re-create the space according to their needs. This can be a simple act of moving a chair around, but with larger repercussions to the "system" that existed until that chair was moved, or it can be an even more significant act like setting up a kiosk to sell food or merchandise, creating a more impactful alteration to that space not only socially and spatially, but also on a legislative level that changes the identity of that space.

In this project, Whyte presents space as something with a life of its own. There are the spaces that work, which consist of the spaces that the public will use and spend time in, and spaces that do not work, which are spaces that are rarely used or frequented. The first are defined by their liveliness, and can be seen as social, outgoing, and busy, whereas the second Whyte describes as "bum" spaces, that are derelict and neglected. The reasons behind this may vary but Whyte discovers that it is mostly due to a matter of design, an obvious finding which was reached after several failed hypotheses and a lot of observation, yet not as simple an answer as it would appear. Besides, Whyte's research goes to great lengths to attempt to uncover the complexity of "design" as an idea, an application, and an outcome. The surprising discovery of spaces designed to be socially active, yet inexplicably failing to be so, are a testament to this, as is the use of spaces by the public in unexpected ways in relation to the original design. As these spaces are created and used, they acquire a distinct individual nature. Perhaps unintentionally, Whyte discusses and presents these spaces as having their own personality:

the outgoing, the introverted, the leisurely and the busy.[24] Aside from these variations, all the public spaces in the project appear to adhere to a similar language, in which the descriptions of public life are the same across all similar types of spaces. The rhythm of the space, the areas of congregation and traffic, show patterns that repeat at regular intervals, with slight differences appearing due to demographics and gender that define these spaces as more corporate, urban, family centred and so on.

Figure 80. William Whyte, photograph of the Seagram Plaza, photograph by either Whyte or a member of The Street Life Project (1971-1980), published in The Social Life of Small Urban Spaces, 1980.

Another distinctive element that arises from the methodology of this project, and one that is often mentioned in the text, is the discrepancy between the original hypothesis and the observational findings. Part of the project was to begin with a hypothesis and follow it up with interviews before moving on to observation. In many cases the idea the researchers had about an occurrence matched the information garnered from the interviews; however, the findings from the observation were vastly different from these hypotheses. These suppositions were all mostly centred around human behaviour, expecting people to prefer one thing over the other, or behaving in a specific way. One such example is the plaza of the Seagram Building, an aesthetically attractive design that in the end resulted in being almost unrelated to the reasons for its social success. After many investigations of the reasons why this plaza is so often used by the public, Whyte's research group discovered that from the aesthetic

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[24] In his chapter on Food, Whyte describes the transformation of St. Andrews Plaza with the installation of an outdoor café. Through this small alteration (serving food) the plaza become a place of increased interchange and sociability. Whyte speculates about its contribution to an increase in marriages and the birth of children. Additionally, he uses adjectives to describe the plazas and streets such as "inviting" for the steps at Greenacre Park, or "courtly" for Paley Park. Whyte and Project for Public Spaces, *The Social Life of Small Urban Spaces*, 53, 58, 63.

design of the Seagram building, the shape of the plaza, and its size, it was in fact the amount of surface area that offered suitable sitting areas that made it successful (a lot of which was ledges, not intentionally designed for sitting but which were the ideal height and depth, with no railings, shrubbery or other obstructions). The finding was as surprising to the group as it was to Mies van der Rohe, according to Philip Johnson's account, when he witnessed people using that space, since it was an unexpected outcome, as it was not designed for this purpose. [25] This exhibits the active human role in an architectural space that takes place in a way that is oblivious to the architect's brief and intentions: people instead respond to it from a bodily perspective, seeking spaces that enable them to sit – it provides flexible shelter from the sun or rain without inhibiting socialisation, and this enables other public uses depending on the local demographic. As a result, they happen to be spaces that have a more human scale and "body-conscious" design.

These findings emerge through on-site observation but also through analysis of the documentation. The research is accompanied by numerous images, photographs taken on site and still images excerpted from the films, as well as several diagrams. The images are used for evidence and to identify specifically what Whyte describes: they present the specific spaces of the case studies, the detail of elements of interest, the conditions at the time of the research and the people. They show people in such a variety of different situations that they become the basis of a separate typological investigation. They are seen sitting, which can also be grouped into subcategories of different types of sitting (reclining, or sitting up, with a leg up on a surface, facing forward or sideways etc.), actions while sitting (reading, people-watching, talking, eating etc.), as well as different locations for sitting (ledges, chairs, steps etc.), they are observed standing, walking leisurely or briskly, and so on. It immediately becomes obvious that the observational method of this research is greatly reliant on this visual material, both for generating findings and for communicating these findings and providing a source for further investigation. Under many of these images Whyte adds further commentary that offers the possibility of other research directions.

This research, despite its seemingly open-ended and unfinished state, the latter often being a reminder of the larger scope of Whyte's research within which this project falls, presents a particular thoroughness in presenting the main aspects of the investigation – the method of observation and the methodology of extracting and processing the findings from this method within the scope of architectural and urban design. As such, it is positioned as the junction of social studies and spatial studies, attempting to bring more insight towards the design of the latter by understanding the former better. As an introduction to this approach the project accomplished far more than was initially planned and shows the refreshing discovery of what has always been there, very much like what happened in *Learning from Las Vegas*. Within the scope of this thesis Whyte's project appears to be a practical approach of "ways of seeing", in which the established knowledge is questioned and

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[25] Whyte and Project for Public Spaces, *The Social Life of Small Urban Spaces*, 29.

adjusted by applying a different perspective. And it is not a one-off case of revealing a learning and moving on: on the contrary, it becomes a lesson in how observation, at all stages and times, and in different ways, may have an illuminating effect on architecture, a method of reviewing and perpetual learning. Most fundamentally of all, Whyte's work shows how wrong or misled we can be in our assumptions, a mistake that is easily remedied by observing. He was often surprised by what he discovered and so have many others, architects, and researchers, and has shown through his research that questioning and experimenting with perspectives is an indispensable part of knowledge.

Social space: a balance of presence and absence

What becomes clear in Whyte's work is that by observing how people interact in and with a space, new findings arise, such as the blurry boundaries of zoning regulations, the guidelines for sitting heights, and the ambiguity of architectural elements. Such an approach to architecture, referencing the human body either in terms of its "proportions" or its "figurative authority" was considered to be a long-forgotten idea after the end of the classical tradition. Anthony Vidler, in "The Building in Pain" (1990), expands on how this phenomenon was not entirely abandoned but instead altered and distanced; where once the human body was projected on the building compositionally and socially,[26] later architectural concepts would follow a different approach.[27] In the modern period and the early 1800s, the projection of the body focused mostly on the mental and spiritual attributes of human beings rather than their bodily parts, in order to achieve a heightened architectural experience through the senses. In its footsteps came Modernism, exploiting this experiential approach of architecture and epitomising the abstraction of the human body. Le Corbusier's Modulor was a brief exception, in that it revisited the Vitruvian man through projection and analogy, yet by now the concept of the human body had already shifted to a different awareness that was not restricted to its form but engaged with the possibilities of movement and transformation. In his analysis Vidler notes that through the consecutive transformations and abstractions of the notion of the human body, the distancing becomes too great. With the emergence of Postmodernism,[28] the approach has turned into an "embodiment" of a fragmented and mutilated human form. This "broken" form produces the idea of pain, as Vidler's title alludes to, also creating surfaces and areas that generate similar unpleasantness for the visitor. This might be desired, as in the case of memorials of traumatic events, where its communication takes

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[26] Vitruvius, Alberti, and Francesco di Giorgio are examples in the Renaissance: they implemented a direct organic analogy in both the building and its situation in the city.

[27] Anthony Vidler. "The Building in Pain: The Body and Architecture in Post-Modern Culture". *AA Files*, no. 19 (1990): 3–10.

[28] Vidler mentions the work of Coop Himmelblau, Bernard Tschumi and Daniel Libeskind as the main examples of this approach.

the form of experience through space –Libeskind's Jewish Museum in Berlin, for instance – however, as a design approach for social, everyday spaces this might prove problematic. The different approaches to the "human" that are developed in these cases, therefore, hint at an issue of "humanistic" concern, where it is not a matter of how central the human body is in the architectural consideration but in what way it is considered.

The matter of humanism in architecture, touched upon in Vidler's writing, has been a subject of various considerations in architectural theory. He groups the different forms of "humanism" into three basic categories:[29] "humanism" as an anthropomorphic projection on architecture, the consideration of "humanism" from a philosophical perspective that focuses mainly on the mind and the bodily experience, and lastly, the characteristics and parts of the human body as defining elements of an environment. All three represent different concepts of the "human" subject, yet the degree of centrality and the definition of the "human" varies. The transition from the classical tradition to Modernism and thence to post-Modernism appears to be a linear distancing and eventual detachment of humanism from architecture. In post-Modernism the notion of "humanism" can be seen as reduced to inanimate objects that resemble parts of a body,[30] their "humanity" disappearing through their fragmentation. Hays describes this shift as being a result of the dialectic between object and subject within a broader socio-economic environment. Similarly, Vidler refers to Sartre's redefinition of the body,[31] in which the existence of the body is directly related to the existence of the architectural space that encases it, with the space an extension of oneself: therefore, the disappearance of the architecture indicates the disappearance of the body – similarly, it may be construed that its fragmentation would signify the suffering of the human body.[32] Both Hays and Vidler suggest that the "human" facing an identity crisis directly affects the architecture surrounding it. In both Modernism and Postmodernism, the condition of architecture is seen as a representation of the human condition, expressing the existential questions emerging from a post-war period, comparing humans to machines within this technological progress and experimenting with the "beyond human" condition of digital and biological advances. The new "human body" is, then, an idea that veers away from its Renaissance definition, transforming into a machine, or an amalgamation of its parts.

Both Vidler and Hays express strongly in their writing that there is something lost through this transition from classical to contemporary architecture, and often express a nostalgia for the humanistic approach abandoned in the process. While the body remains constant, either through its

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[29] He also mentions that these categories do not always follow a historical linearity but can be seen to re-emerge at different points, occasionally even in a combination of the three.

[30] Vidler uses the example of Mary Shelley's "Frankenstein".

[31] According to Vidler, Sartre, through his formulation of the "body in the house", distances himself from the classical approach, where the body informs our understanding of architecture, and instead considers the definition of the body in accordance with the space surrounding it.

[32] Vidler, "The Building in Pain: The Body and Architecture in Post-Modern Culture", 9.

form, mentality, or representation, what appears to suffer most through the contortions and abstractions of contemporary architectural form seems to be what is considered "humanism":[33] the positioning of the human as a being of individual and social agency.[34] The classical anthropomorphic approach allowed for certain human attributes to transfer to architecture through bodily metaphors,[35] thus engendering a more humanistic view of architecture and the city. [36] This humanism was to a large degree related to the political and social attributes[37] whose projection through the body declined with the later adoptions of "humanism" that focus on other bodily attributes, breaking apart the cohesiveness of the body. The social aspects of the body, therefore, represent a large part of what constitutes a "humanist" space. The crisis of the "human" signifies that there is direct correlation between the "human" concept and architectural practice, foregrounding the social aspect and the need to re-assess the values that define a space's social capacity.

As seen in Simmel's earlier analogy between space and its social capacity, through this humanistic perspective a higher degree of characterisation is attributed to what is referred to here as social space. Humanism becomes an indicator of the "effectiveness" of the social space: one that adheres closer to values of "humanism" will promote all those aspects that engender social presence and interaction and will therefore be considered as more "humanistic" than spaces that prohibit interaction or incite negative feelings and emotions, for example in the case of Libeskind's Jewish Museum. This distinction is what Whyte described as either successful or unsuccessful in regard to the design of public spaces, and what expresses their capacity to provide and facilitate public use and socialisation. Whether the space is physically or conceptually occupied is another way to approach this subject, one in which the "success" of the space to fulfil its social purpose is not entirely reliant on its use but instead on its ability, or potential, to do so. By that measure, the "experience" of space (a more nuanced and layered perception) becomes a defining value here that does not necessarily require a physical presence but that can also be perceived through other means, including a second-hand account or a reproduction of that space, such as experiencing the space through a photograph.

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[33] Through time, "humanism" adopts different meanings, from the pre-Socratic meaning of "man of reason", the Renaissance description of values of the classical education, to freedom and dignity in later modern variations. Yet at the centre of almost all the definitions lies the human being, with a certain sociological proposition. Anthony B. Pinn, *The Oxford Handbook of Humanism* (New York; Oxford: Oxford University Press, 2021).

[34] This refers back to Hays' comment on the deprivation of autonomous individualism encountered in Modernism.

[35] Vidler mentions Filarete's analogy of bodily orifices as doors and windows and the different human organs as parts of the city that follow a similar function in sustaining it.

[36] The building and the city act as an extension of the image of the body and engender a familiarity through their common subject.

[37] Referring to Renaissance theorists: "For them, buildings were veritable bodies – temples the most perfect of them all, as were cities, the seat of the body social and politic." Vidler, "The Building in Pain: The Body and Architecture in Post-Modern Culture", 4.

The subject of presence in architecture, and the philosophical understanding of absence within architecture, was a central point of the debate between Eisenman and Derrida in the '90s. The debate unfolds through a series of letters between them articulating their quite different positions on this matter. Perhaps not the main catalyst, but a good starting point for this debate, nonetheless, can be identified in Eisenman's position on anthropocentrism in architecture in his 1968 publication *Moving Arrows, Eros, and Other Errors*. Eisenman expresses, through the example of the Romeo and Juliet project,[38] a process of negation and an opposition to the need for architecture to be anthropocentric. At first glance, the project is an architectural expression of a literary work: Shakespeare's *Romeo and Juliet*, employing buildings, their relationships and situations within the urban fabric, and their experience, to enact the tragic narrative. But, with this conceptual proposal, Eisenman uses the Shakespearean story to subvert architecture's traditional anthropocentrism with a prescribed narrative. Like the play's different parts, he fragments and divides the site and its architecture, creating a complex system of identities and interactive elements. This is presented through diagrams and drawings that visually express the nature of scaling, where the presence of the person is displaced by the presence of the architecture, and, in particular, the fictional narrative created for that architecture.[39] By fragmenting this architecture, he fragments the human experience, requiring the visitor to follow through all the steps of the play to experience it, and so at the same time disallowing any possibility of change outside of the prescribed narrative. In this architectural process, that defines a broader architectural practice of the time (i.e., in the works of Frank Gehry and Daniel Libeskind), architecture is seen as elevated to an idea which is above the human being, revolving around the idealism of the creator's concept, the immediacy of construction and the correlation of space to these values. Eisenman uses this project to critically address issues of the human body, anthropocentrism, and other related ideas that he considers are outdated in architecture and to signify the irrelevance of these traditional notions. Derrida accurately points this out through a comparison between his approach to architecture, the temple, and the idea of God that is being expressed through the notion of the presence of the absence.[40] Eisenman's position seems to be a double-edged sword, on the one hand challenging traditional notions that carry with them long-held issues which, however, also hold reasonable concepts established in reality, while on the other hand he moves towards a definition of architecture whose purpose is questionable and its role grounded in fiction. In this case absence takes on a more metaphysical nature, one of the three axioms that are presented as discontinuity, recursivity, and self-similarity and which are expressed in practice through the site, the programme

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[38] Peter Eisenman's prizewinning proposal for the twin Romeo and Juliet castles in Montecchio Maggiore, near Vicenza, was exhibited in the 1985 Venice Biennale and the subject of his publication Peter Eisenman, *Moving Arrows Eros and Other Errors: an Architecture of Absence* (London: Architectural Association, 1986).

[39] In this way, Eisenman critiques architecture's struggle against tradition as discussed in John Whiteman, "SITE UNSCENE – Notes on Architecture and the Concept of Fiction. Peter Eisenman: Moving Arrows, Eros and Other Errors," *AA Files*, 12 (1986): 76–84.

[40] Jacques Derrida, Hilary P.Hanel, "A Letter to Peter Eisenman," *Assemblage,* 12 (1990): 7–13.

and representation.[41] This scaling and distancing prompt a note of caution from Derrida, who ponders on the humanism of this architecture, for what seems to be the result of the construction of such an architecture is the experience of a fictional narrative, an experience that is not that of the relationship between the visitor and the space but that between the story, the brief and the construct.

Following an ongoing debate between Eisenman and Derrida,[42] J. Hillis Miller, at the University of California, Irvine, invited them both to continue their conversation as part of the conference "Postmodernism and Beyond: Architecture as the Critical Art of Contemporary Culture", held in 1989. Derrida, who was unable to attend at the time, formulated his response to Eisenman's latest writings[43] around the subject of his absence, correlating it to the discourse on absence that is expressed in Eisenman's 1968 project. The distance between Eisenman and Derrida, and Derrida's physical absence, become then a metaphorical example of the communication that is required (through their correspondence) to attain meaning, which is jeopardised in the architectural approach Eisenman was proposing. Derrida suggested his inability to attend in person and confront Eisenman resonated with the absence of the human presence from Eisenman's architecture: Derrida repeatedly refers to his absence in his letter, his voice echoing his presence that attempts to sound reason. He employs his absence as an example of his critique, rebuking Eisenman for his selective interpretation of the term and his narrow consideration of past explorations (Walter Benjamin's writings in particular) and the overall position regarding humanism and de-construction.[44] The contradiction between Derrida's reasoning, that encompassed the realities of religion, economy, materiality and poverty, and Eisenman's idealism of technology, systematic precision and symbolic interpretation, appear initially so far apart, yet the connection can clearly be found when considering the aspect of absence that is pondered upon in both cases. The distancing of architecture from the human being appears to Eisenman as an opportunity to further explore the possibilities of architecture, allowing for

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[41] "… the project proposes to employ an other discourse, one which attempts to eschew the anthropocentric organizing principles of presence and origin, for a discourse founded in a process called scaling". In Peter Eisenman, *Moving Arrows Eros and Other Errors: An Architecture of Absence* (London: Architectural Association, 1986).

[42] Exchanges between the two began with Eisenman and Derrida's invitation by Bernard Tschumi to create a joint project for a garden at the Parc de la Villette in Paris in 1985-87. The interaction that ensues is documented in Jacques Derrida et al., *Chora L Works: Jacques Derrida and Peter Eisenman* (New York: Monacelli Press, 1997), and is the subject of the article Jeffrey Kipnis, "/Twisting the Separatrix/," *Assemblage*, 14 (April 1991): 30–61. Some of the letters in their correspondence mentioned here include: Derrida and Hanel, "A Letter to Peter Eisenman", Peter Eisenman, "Post/El Cards: A Reply to Jacques Derrida," *Assemblage*, 12 (1990): 14–17, https://doi.org/10.2307/3171114, Peter Eisenman, "There Are No Corners After Derrida," *Log*, 15 (Winter 2009): 111–19.

[43] Peter Eisenman, *Moving Arrows: Eros and Other Errors: an Architecture of Absence.*

[44] John Macarthur, "Experiencing Absence: Eisenman and Derrida, Benjamin and Schwitters", *Knowledge and/or/of Experience*, (Brisbane, QLD, Australia: Institute of Modern Art, Brisbane, Queensland, 1993), 99–123.

a redefinition and restructuring of its identity. However, Derrida, among others,[45] finds evasions and omissions in this approach that engender problematic responses. For Eisenman, absence is detachment,[46] in which case the person here is being detached from the architecture and their absence is being replaced by an idea.

Absence, or presence, which here essentially seem to be different sides of the same coin, have in one way or another been fundamental notions of architectural thought. Although their definition and role does not appear to be historically consistent, their "presence" in architectural theory and practice can be found throughout architectural history. This is presented through all the points that both Eisenman and Derrida make in their interactions, and which can be summed up as a spatial, experiential and visual interpretation of humanism, or the lack thereof, in architecture. This exchange of letters also succeeds in signifying the various historical moments when the direction of architecture veers towards or away from such humanist approaches, a fact that is rarely found in such an explicit expression of architectural practice and theory in relation to the notion of absence. Through Vidler's "humanistic" categorisation, the end of the classical period in architecture signals the end of presence, and with the ensuing human fragmentation from Modernism onwards a new era of absence begins. Absence, however, is not entirely the opposite of presence, but instead a critique and analysis of the positioning of the human within architecture, therefore it heralds the beginning of a series of questions and debates about the meaning of absence that continues until today. It exists in renewed attempts to relate fundamental architectural notions to the social nature of space and develop the future of spatial theories that can fulfil a more complex agenda, including responding to humanistic approaches while maintaining a critical function and simultaneously offering a layered experience as both a physical space and as an architectural concept.

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[45] Whiteman. "SITE UNSCENE – Notes on Architecture and the Concept of Fiction".
[46] Eisenman, "Post/El Cards: A Reply to Jacques Derrida".

Architecture of Absence

Figure 81. Candida Höfer, DHFK Leipzig, IV, 1991, chromogenic colour print, 51 x 61 cm.

The investigation of absence in architecture appears to be more rigorous at the crossroads of inter-disciplinary and trans-disciplinary fields than in its limited appearances in architectural theory. In the previous example of Whyte's research, absence was a logical inference in an investigation that focused on social space and the relative success of design to the presence or absence of social activity, and Derrida's response to Eisenman featured several references to similar investigations in philosophy and the social sciences. In the following project, absence becomes a defining notion of the nature of architecture, reflecting theories explored earlier on social space, architecture's role and purpose, and the value and role of experience, yet viewed through the analytical approach of art photography. Through this approach, "absence" is presented as a mechanism for reading by which the social nature of the architectural forms is expressed and experienced, enriching the definitions of absence being explored in architecture from an alternative perspective: one that offers both visual and critical support.

In 2005 the photographer Candida Höfer exhibited a collection of photographs with the title *Architecture of Absence* at the University Art Museum, California. [47] It presented work that was the most representative of the artist's photographic approach, comprising a collection of interior architectural photographs taken in public and institutional spaces with an identifiable theme of interior public or semi-public spaces and their social aspects. The title, subject matter, and purpose of this work places it at the heart of this investigation, looking into absence and architecture from this specific photographic perspective.[48] In addition to this, the artist's background, as a member of the first generation of the Düsseldorf School of photography, lends it the objective critical approach that distinguishes the Düsseldorf School of Photography approach and that presents immediate architectural interest. The collection features photographs taken over a span of fifteen years since the early '90s, carefully curated to express Höfer's interpretation of social space. By no means exclusive representations of this approach, it effortlessly reflects Höfer's broader practice. As with most of the artist's subjects, these photographs capture public and semi-public spaces such as gymnasiums, restaurants, theatres, museums, train stations, libraries, etc., spaces that are designed for people and therefore are expected to be full of activity. Instead, the photographs represent these places devoid of people, which explains the use of "absence" in the title. Ironically, despite the absence of people the photographs do not express in the least a sense of absence but enable, in spite, or because of, this "absence", to express a presence of space.[49]

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[47] Previously published in Candida Höfer et al., *Architecture of Absence* (New York: Aperture, 2001), the exhibition was a retrospective of Höfer's work from the 1990s.

[48] The similarity of the titles of Eisenman's *Moving Arrows Eros and Other Errors: An Architecture of Absence* and Höfer's *Architecture of Absence* positions the two works as part of the same dialogue.

[49] The three essays included in *Architecture of Absence* present different views on the "absence" in Höfer's photographs and its intended message to the architecture. Constance Glenn defines Höfer's "absence" as a direct continuation of the Bechers' teachings in using rigorous methods and focusing on architectural motifs; her "absence" is expressed through the focus on the "space" and the method of "light". Mary-Kay Lombino reads in Höfer's "absence" an attempt at humanising architecture, while Victoria Heckert defines her "absence" as a social commentary on architecture's public role.

Figure 82. Candida Höfer, Deutsche Bücherei Leipzig IX, 1997, chromogenic colour print, 27.9 × 27.9 cm.
© Candida Höfer. All rights reserved.

Many of the photographs are taken in Germany, the few exceptions being spaces in the United States and other European cities. *Deutsche Bücherei Leipzig IX 1997* depicts the interior of the German National library in Leipzig (a few minutes from the DHFK Gymnasium that is presented through another captivating photograph in the series). The library is also part of the series *Libraries*, where three different shots are used as part of the collection.[50] The DBL, built in 1914, has been part of many events including a change in role as an institution of public law, either a site of censorship or a haven for various German works depending on the times, and political and social change during the events of the First and Second World War. *DBL IX* shows the large humanities reading room from the room's mid-height, creating a single point perspective that is made even more prominent by the

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[50] Candida Höfer, Umberto Eco, and Alastair MacEwen, *Libraries* (London: Thames & Hudson, 2005).

room's design. A balcony spans the left side of the wall,[51] the shelves reaching almost the mid-point of the wall's height, while tall windows are spaced equidistantly on the right. The walls and ceiling are plastered in white, contrasting with the dark wood panelling and dark grey floors. Overall, the room is an exercise in symmetry, down to the rows of desks, chairs and lights. The square format, once a signature style of Höfer's photography and often seen in her 1997 photographs,[52] strengthens the effect of perspective and symmetry, dividing the image in half.

Figure 83. Deutsche Nationalbibliothek, German National Library, opposite side of the reading room.
© DNB, Stephan Jockel, CC-BY-SA 3.0DE.

This photograph might be read in several different ways that strengthen the allusion to absence or its insinuated lack thereof, the process of which can be applied in one way or another and in varying degrees to all the other photographs in the series, and to the artist's broader body of work. For one, the systematic selection of subject matter, mostly historical buildings, adds a certain experience to the reading of the space. There might be perhaps an additional reasoning besides symmetry in the choice of the direction from which the reading room is photographed. On the other side of the room an Art Nouveau painting by Ludwig von Hoffman from the 1917s is hung on the

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[51] Christian Rau, *"Nationalbibliothek Im Geteilten Land". Die Deutsche Bücherei 1945–1990* (Göttingen: Wallstein Verlag, 2018).

[52] The square format is also found in her *Liverpool* series but becomes more common in her work after the influence of the Düsseldorf School.

wall, the second one in the series that would have been hanging on the side of wall shown in the photograph if it had not been destroyed in the Second World War.[53] The artefacts and the building's design itself lend the historical significance that allow the viewer to position themselves in relation both to it and to time, as opposed, for example, to a blank set of walls, that would not allow for such a relation history and its events. This connection to time and space continues in the programming of the space and its public role. The library in particular, a fact that might usefully position the *Libraries* series within the *Architecture of Absence* series, denotes a somewhat unobtrusive presence that reflects the social conduct that exists in all libraries. The scholarly quietude that is expected to be found in such spaces, the readers' engrossed focus on their reading, inspire an atmosphere of stillness. This atmosphere is recreated in the photograph through the use of light, its subtle composition and attention to detail that draw the viewer in as if they are there themselves.

A defining characteristic of Höfer's photography is the use of the large format (tableau) that is generally used by all the Becher students. As with many of the other artists, Höfer has, through the years, experimented with photographic equipment and prints, resulting in images of varying scale, detail and lighting, as well as colour and composition. The DBL photograph is one of the smaller of Höfer's prints, measuring about 27.9 x 27.9cm: other photographs exceed 180cm.[54] The scale of these prints offers a different way of reading the images, affecting the experience and perspective through the interaction between the viewer and the photograph as well as the viewer and the space. The square format of *DBL IX* imposes a specific reception through its viewing. It emphasises the "ethereal quietude of her spaces",[55] distracting the eye from the density of the architectural detail and ornamentation, instead presenting a delicate visual creation. Despite its smaller scale, the square format draws the viewer through its central perspective and symmetry, positioning the viewer in the photographer's place and sharing the same view. Höfer intentionally uses this technique in these photographs in order to give the viewer the sense of control that the photographer holds while capturing the space.[56] This measure of control is also reflected in the non-central perspective photographs, where the photographer takes great care in order to avoid distortions. In this manner, the diagonal views and exaggerated perspectives[57] do not create a dynamism of activity, as might have been found in other diagonal perspective images, but instead give depth that emphasises the monumentality of the image. Therefore, monumentality, power and control are elements that are often part of Höfer's photographs, establishing the presence of the spaces like a portrait of a well-known

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[53] Ludwig von Hofmann, Annette Wagner, Institut Mathildenhöhe, *Ludwig von Hofmann: arkadische Utopien in der Moderne*. (Darmstadt: Institut Mathildenhöhe, 2005), 319.

[54] i.e., Candida Höfer, *Villa Massimo Roma I*, 2012, chromogenic print, 180 x 172.6 cm.

[55] Glenn, "Candida Höfer: Absence in Context," 18.

[56] Lucy Soutter, *Why Art Photography?*. (London: Routledge, 2018), 39, https://doi.org/10.4324/9781315270630.

[57] *Palacio Real Madrid XI 2000* photograph

figure. The large format, clear perspective, and even the clinical approach of Höfer's objective positioning allow the identity and role of the architecture to speak for itself, establishing its existence in reality. The viewer is then looking through a frame to a space that becomes the continuation of the one they are currently occupying, and they are visually transported to another room. The clarity and scale of the photographs lend even more credence to the realism and temporality of these "rooms". A chair positioned off-centre, a stack of books waiting to be re-shelved, the lights that are turned on, create a sense of suspense. This is a public space that the viewer can cross to choose a book and take a seat at any of the available desks.

Höfer's photographs have frequently been critiqued for their intended message, their lack of human presence and their subject of empty public spaces,[58] her selection of buildings commented on for their link to privilege and self-importance. "Dispassionate", "disembodied", "blank", "empty", are some of the words used to describe what is being conveyed through the practice of absence.[59] Michael Fried often comments on these elements of her work but reminds us also of the contrast created due to this;[60] through the lack of people, the well-arranged, clutter-free spaces and ubiquitous light the spaces exude an ethereal quietude. Mary-Kay Lombino, curator of the exhibition "Architecture of Absence" references the work of Uta Barth, who also photographed illuminated interiors, and suggests that Höfer creates "pictures [*that*] give blankness an emotional plentitude".[61] Through a precise curation of the image, Höfer edits out the superfluous and allows only the elements that can provide the experience that she intends. Through the photograph, literally and metaphorically, Höfer uses light to capture the spaces and communicate what she sees in them. These facets of clarity, order and tranquillity seem to go hand in hand with the design of the reading room in DBL, the colours and arrangement of the space allowing the light to take various forms that create this experience. The tall windows, the source of the natural light flooding the room, do not overpower the balance of the image. The white-painted walls and ceiling equally diffuse the received light throughout and, yet again, do not overpower the balance, giving enough brightness to create lightness, yet allowing enough contrast to notice the light that comes from both the ceiling lamps and the desk lamps. The

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[58] A related critique is found in both Fried's *Why Photography Matters as Art as Never Before* and Lucy Soutter's "Candida Höfer and the Question of Criticality," in *Why Art Photography*? (London: Routledge, 2018), 39–42, https://doi.org/10.4324/9781315270630. For them, emptiness becomes the predominant element that expresses the "objectiveness" and the dispassionate approach (which is why Fried includes her work in the same chapter as Demand's detached approach to the subject in his work): Soutter elaborates on the particular mode of reading required for Höfer's photographs to be able to discern anything further than this emptiness and the initial superficiality of privilege.

[59] These adjectives are used in Soutter's critical review of Höfer's photography, in Soutter, "Candida Höfer and the Question of Criticality," in *Why Art Photography*?, 39-42.

[60] Michael Fried, in "Thomas Demand's Allegories of Intention; 'Exclusion' in Candida Höfer, Hiroshi Sugimoto, and Thomas Struth," in *Why Photography Matters as Art as Never Before*, comments on Höfer's work to correlate the role of her investigations of "absence" with the role of the tableau format in his argument for the emancipation of photography in the arts.

[61] Candida Höfer et al., *Architecture of Absence* (New York: Aperture, 2001).

diffused light takes on a near-physical form, through a haze suspended near the windows and the reflecting discs on the shiny desktops. The materials become more prominent in their reaction to the light, gaining a certain quality that adds to the beauty and appreciation of the space.

Figure 84. Candida Höfer, Ca'Dolfin Venezia I, 2003, chromogenic colour print, 152x171 cm.

In another photograph in the series, this time *Ca'Dolfin Venezia I, 2003*, Höfer takes on an even larger scale to present a more visually complex space. Measuring 152 x 171 cm, this is another "square" format photograph that shows the ornate salone of a Venetian palazzo. Unlike the photograph of the DBL, this image offers a richness of colour and architectural detail, the most pronounced being the elaborate chandelier that dominates the centre of the photograph. The reason this photograph is mentioned here following the more austere atmosphere of the DBL photograph is to highlight the common approach and language that Höfer uses, regardless of the architectural style of the space. The light once more acts as the unifying language filling the space and defining it through a process of absence and presence that essentially results in the contrast of light. The composition of the

image is also important: where the white walls of the DBL balanced the light diffusion in the space, here the mirrors on the walls act in a very similar way. Light, and its connection to colour, becomes more apparent in this second photograph. According to subtractive colour theory,[62] white is the equivalent to the absence of colour, and therefore the use of white (or white light) suggests an absence of something that used to, or should, be there.[63] It is a contradictory perception of presence and absence, since the state of absence signifies the capacity of presence, or an occupation that was disrupted at some point in time. In her spaces, Höfer creates a dialogue between the architectural elements, the objects, the colours and the light accentuating this contradiction. She manipulates light through a delicate and soft approach that humanises space. Through the use of extremes, tensions and contradictions the space is serenely transformed into a vivid environment that suggests an invitation and a presence. Even the most empty and cold of spaces are metamorphosed through her camera into the most sublime and evocative atmospheres: "she takes an interior view of an uninhabited space and furnishes it with a humanizing quality, while avoiding sentimentalism or nostalgia".[64] Despite the complexity of the space, Höfer, yet again, expresses a tranquil environment that avoids becoming nostalgic or inciting fantasies, but instead invites a detailed and careful observation. On the one hand, the transporting of the space depicted in a more emotional or imaginative direction is achieved through the objective approach by the photographer. The viewer is held in limbo, an observer of the scene yet not part of it, invited to it yet always distanced by it. On the other hand, this positioning of the viewer allows for a more analytical observation that is aided by the multi-faceted use of the light.

Light, therefore, acts as the visual expression of the underlying concept of these photographs, creating a contrast of light and a contrast of concepts. Höfer's work balances opposing notions, what Lombino describes as embodying "at once both abundance and emptiness" or what the specific series expresses through presence and absence. For it is through the absence of people and activity that it is possible for the viewer to observe the space and its light and appreciate their own presence. The architecture, that is the result of this interaction, emerges through this observation with its own identity and role. Its social aspect is equally felt, without the activity of social practices but through the "activity" of the light and the design. Through her "objective" approach Höfer does not express her own interpretation of these spaces, and as such it would not be correct to assume that she "re-creates" these spaces. Instead, she introduces a particular way of seeing which, through her composition and selection of subject shows a constant attention to aesthetics, remaining often "in

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[62] This notion is used by Glenn in "Candida Höfer: Absence in Context," 19, but is also found in other ideological debates, for example Keith Alexander Bryant, Gary L. Anderson, and Bernardo Gallegos, "Bodily Excess and the Desire for Absence," in *Performance Theories in Education: Power, Pedagogy, and the Politics of Identity* (New York: Routledge, 2005.), defining "white" as pure, free from excess substances (i.e., colour), virgin.

[63] George A Agoston, "Light and Color," in *Color Theory and Its Application in Art and Design* (Berlin: Heidelberg: Springer Berlin / Heidelberg, 2013), 17–27.

[64] Mary-Kay Lombino, "Inner Order," in *Architecture of Absence* (New York: Aperture, 2004), 23.

concert with the intentions of the architects themselves".[65] "Architecture of Absence" becomes, then, an exercise in architectural analysis that through objectivity and observation presents the qualities of absence in architecture as a social space.

There is a certain distinction between landscape, architecture and the spaces that Höfer focuses on here. Space is distinguished from its function or particularity and is defined by the physical and social presence that it has of its own.[66] She constructs an "image of space"[67] through the absence of people and her use of "light, form, pattern and references to the human presence*[68]*. Her compositions create a very vivid and social space, something that will be seen later, used in a contrasting way, by Thomas Struth. It is important to note that this exploration of, and experimentation with, absence is only a recent development of a longer investigation of social space and architectural landscapes that go back to Höfer's earlier projects and her tutelage under Bernd and Hilla Becher. As a subject, but also as an exercise in visual expression and representation, the subject of absence has played a very strong social role for Höfer, that through these later series has managed to reach a refined visual, architectural and conceptual expression. These series, now open to interpretation, gain a more direct perspective seen under the light of Höfer's past projects and those of her colleagues.

[65] Glenn, "Candida Höfer: Absence in Context," 18.

[66] Ibid., 17.

[67] Jae Emerling makes this distinction in a way that elevates the role of the photographer from a person who captures a scene to an artist who creates it. Jae Emerling, "A Becoming Image: Candida Höfer's Architecture of Absence," in *Contemporary Art about Architecture* (New York: Routledge, 2017), 69–86.

[68] Glenn, 17.

Figure 85. Candida Höfer, Liverpool IX, 1968, gelatin silver print, 20.3 x 20.3 cm.
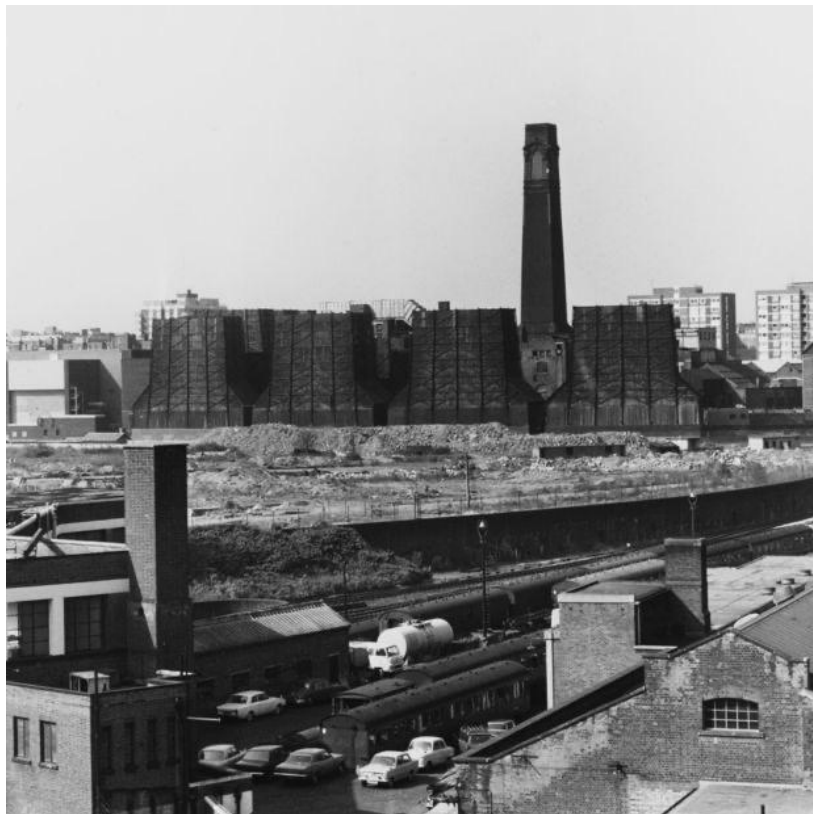
Figure 86. Candida Höfer, Liverpool XI, 1968, gelatin silver print, 20.3 x 20.3 cm.

Born in 1944 in Eberswalde, Germany, to Werner Höfer, a well-known theatre critic/television journalist and Elfriede Scheurer, a ballet dancer,[69] Candida Höfer dedicated her early years to studying the arts. She began by studying conventional photography at Kölner Werkschulen, the Cologne Art and Craft Schools (1964-1968), that trained artists in the visual arts, architecture and design, and continued her studies at the Kunstakademie Düsseldorf, originally studying film under Ole John (1973-1976) and eventually photography under Bernd Becher (1976-1982).[70] Before attending the Kölner Werkschulen, Höfer had already begun working with photography and had done a one-year voluntary traineeship at the Schmölz-Huth studio in Cologne.[71] Between 1970 and 1972 she worked as an assistant to the photographer Werner Bokelberg, during which time she was reconstructing the daguerreotype technique.[72] Between her studies Höfer created a series of different photographic works that investigated subjects of people in the city. In 1968 she visited Liverpool and created a collection of photographs that was inspired by the poetry of the band The Liverpool Scene, linking photography and the urban setting to lyric poetry.[73] The photographs range from urban settings to portraits and can be considered as a precursor to the series she produced later in Germany on the subject of Turkish immigrants.

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[69] Alan Cowell, "Werner Höfer, 84, a Fallen Idol Of TV Journalism in Germany," *The New York Times*, November 27 1997, https://www.nytimes.com/1997/11/27/world/werner-hofer-84-a-fallen-idol-of-tv-journalism-in-germany.html.

[70] When Höfer attended the Kunstakademie in 1973, the School of Photography did not yet exist. In this new academic and artistic environment Höfer encountered many renowned artists and their students, among whom was Gerhard Richter and his classmates. Notably, by the time she began studying at the Kunstakademie Düsseldorf she had already considerable photographic experience and a body of work, in which was her series *Liverpool,* that was not exhibited until thirty years later, while her series *Türken in Deutschland* was used as part of her application portfolio to Bernd Becher's course. Three years after her studies in film she became part of Bernd Becher's first photography class and was the eldest and most experienced of his new students.

[71] Anne Gantefführer-Trier, "Candida Höfer: Rooms with a View," *Goethe Institut*, 2012, https://www.goethe.de/en/kul/bku/20373446.html.

[72] Gronert, *The Düsseldorf School of Photography*, 25.

[73] Gantefführer-Trier, "Candida Höfer: Rooms with a View."
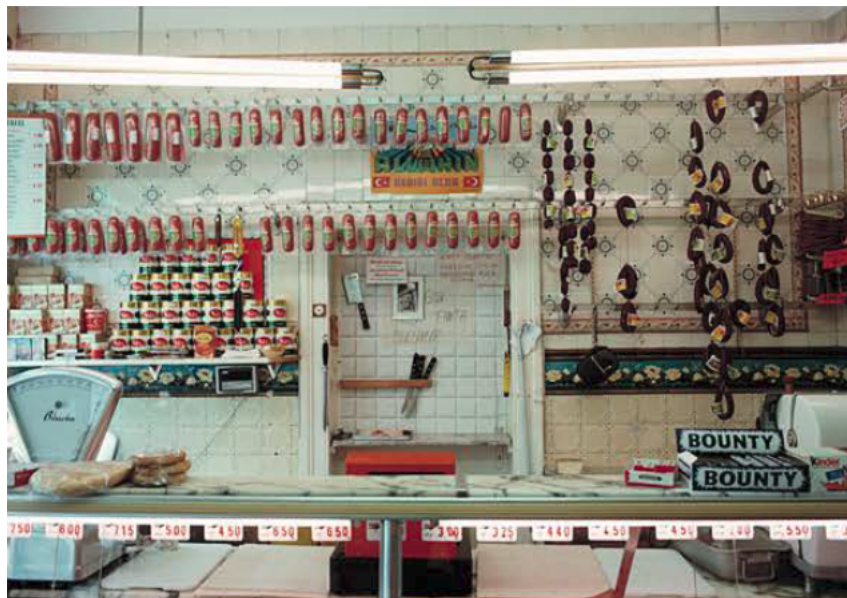
Figure 87. Candida Höfer, photographs from the slide projection of Türken in Deutschland, 1979, (Office Candida Höfer). © Candida Höfer. All rights reserved.

Türken in Deutschland represents a significant project in Höfer's development as a photographer and the social aspect of her art. Although usually referred to as a single project under this title, the project was undertaken in two separate photographic parts, the first being *Türken in Deutschland* and the second *Alltag in der Türkei*: it was published in small booklets with text and images called *Diaserien.* Undertaken between 1972-1979, the project reflects the social, cultural and political unrest encountered in Germany during those years. Following the destruction and neglect of German agriculture and industry after the Second World War, the Federal Republic of Germany implemented a series of policies to increase the workforce through immigration, known as the

"Gastarbeiterprogramm".[74] As a result, West Germany welcomed a large number of foreigners to remedy the labour shortages and help rebuild the country.[75] This led to the presence of non-German minorities who, despite being integral to the "economic miracle" which transformed the war-torn country into a modern and progressive state, suffered cultural and social discrimination.[76] The Turkish minority in particular, who made up the largest proportion of immigrant workers, were considered as the "greatest threat to German culture and identity".[77] The lack of effort made to "integrate"[78] them into German society and the fluctuating position of the government regarding the foreign workforce eventually resulted in an inhospitable stance between indifference and contempt.

In this general climate of discontent, artists such as Höfer chose to take an active role in bringing the issue of the *Gastarbeiters*, and specifically the Turkish minority, to the forefront of social and political consciousness. Returning to Cologne after a two-year stay in Hamburg, she became aware of the increased Turkish population and their presence within the German urban environment.[79]

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[74] According to this, between the 1950s and '60s West Germany signed bilateral recruitment agreements with other countries that were facing financial and unemployment issues. Ruth Ellen Mandel, *Cosmopolitan Anxieties: Turkish Challenges to Citizenship and Belonging in Germany* (Durham, N.C.; London: Duke University Press, 2008).

[75] The term *Gastarbeiter*, translated as "guest worker", carries with it some ambiguous connotations. The term is often associated with another, "*Fremdarbeiter*", which translates as "foreign worker" and was used during the Nazi period for both the migrant and forced labourers. In Roberto Sala, "Vom 'Fremdarbeiter' zum 'Gastarbeiter': die Anwerbung italienischer Arbeitskräfte für die deutsche Wirtschaft (1938-1973)," *Vierteljahrshefte für Zeitgeschichte / im Auftr. des Instituts für Zeitgeschichte, München* 55, no. 1 (2007): 93–120. This led to further negative connotations and separated the Gastarbeiteren from society on multiple levels. On one hand, it underlined the individual's temporary situation, while on the other it separated them from the whole. Furthermore, the Gastarbeiter was a labourer, often doing manual work, and therefore many immigrants who travelled to West Germany under this programme lacked the educational skills that would otherwise have helped them be better integrated into society. This segregated them in specific areas and in specific occupations, limiting their role and presence in the urban context. By the 1970s what had been considered a temporary measure had resulted in a significant increase in the population of foreign workers, a situation that began to alter the fabric of the local social and cultural context. In Rita C-K Chin, "Imagining a German Multiculturalism: Aras Oren and the Contested Meanings of the 'Guest Worker,' 1955-1980," *Radical History Review* 83 (2002): 44–72. While Germans expected the workers to return to their own countries at some point, over the years it became apparent that only few of them were returning. Many of them decided to remain and brought their families to their adopted country, multiplying their presence in the urban context and forming their own communities. Gottfried E. Volker, "Turkish Labour Migration to Germany: Impact on Both Economies," *Middle Eastern Studies* 12, no. 1 (1976): 45–72.

[76] David Horrocks and Eva Kolinsky, *Turkish Culture in German Society Today* (Oxford: Berghahn Books, 1996), 76.

[77] Amy A. DaPonte, "Candida Höfer's Türken in Deutschland as 'Counter-Publicity,'" *Art Journal* 75, no. 4 (October 1, 2016): 16–39, https://doi.org/10.1080/00043249.2016.1269560.

[78] Definitions of the meaning of "integration" played a significant role in the lack of effort applied. On the one hand it meant an attempt to recognise the minorities as part of German society; on the other, however, it resulted in significant racial, cultural, and other social repercussions. Oliver Trede, "Zwischen Misstrauen, Regulation und Integration: Gewerkschaften und Arbeitsmigration in der Bundesrepublik und in Grossbritannien in den 1960er und 70er Jahren," in *Studien zur historischen Migrationsforschung*, 28 (Paderborn: Ferdinand Schöningh, 2015), 265–374.

[79] Markus Heinzelmann et al., *Candida Höfer: Projects Done* (Köln: Walther König, 2009), 174–75.

Gradually she began to notice the cultural differences and the ways in which they were both part of the general population and at the same time distinct from it. In fact, as German ethnologist Michael Oppitz mentions, it was during her visits to Oppitz's and German art historian Benjamin Buchloh's apartment in Cologne that she began her anthropological investigation by observing how differently the Turks occupied the park opposite the apartment, and how the more the Turks congregated in the park the less the Germans would use the space.[80] It was as part of this anthropological study that the first images of the *Türken in Deutschland* began, with a series of black-and-white 35mm photographs. Through her work, Höfer attempted to educate and inform the Germans about the Turkish community's history, culture, and its current situation in Germany, attempting to close the gap between the two cultures and confront the apprehension that was promoted by the various political parties. In *Türken in Deutschland* she photographed Turkish immigrants in their shops, homes and parks as they socialised in everyday life, while in *Alltag in der Türkei* she documented Turkish people in their home country.[81] The photographs are a view into the ordinary lives of this community and are defined by their frankness and lack of dramatisation, presenting them simply as ordinary people someone might encounter during their day. However, despite their sympathetic nature they were in essence a social and political means of "counter-publicity".[82]

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[80] Heinzelmann et al., *Candida Höfer: Projects Done*.

[81] During the 1970s Höfer visited Turkey and created the series *Alltag in der Türkei* (Everyday life in Turkey), a slideshow of colour slides that portrayed the Turkish people in Turkey, as opposed to the series *Türken in Deutschland*. She travelled around Turkey by car visiting different cities and documenting people in their day-to-day lives. By juxtaposing these two series, she brings an understanding of the elements that defined the people who emigrated to Germany, their background and their identity that was expressed by their outlook and the way they arranged and decorated their spaces.

[82] DaPonte.

Figure 88. Candida Höfer, photograph from the slide projection of Türken in Deutschland, 1979, (Office Candida Höfer). © Candida Höfer. All rights reserved.

The photographs were always taken with the permission of the subjects, who Höfer approached and with whom she interacted. She built a connection with her subjects that went beyond simple photographic documentation.[83] Her photographs are not merely images of Turkish people for "facile visual consumption": they "possess a sense of openness, reciprocity, and critical analysis of visual and social power structures*".[84]* The subjects are active participants in her photographs and often express an interaction of a jovial and friendly kind with the camera. They are knowingly and willingly becoming part of the project, and this comes through as a kind of reciprocity that is repeated throughout the series. It becomes further evident in shots in which she includes her reflection on the shop windows, becoming part of the photographic synthesis and therefore part of the Turkish-German dialogue that she creates. These shots differentiate the work from a scientific, distanced

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[83] In an interview in 2007 she mentions: "It had all started in parks in Cologne. I felt somewhat touched by the ease with which Turkish families adopted this environment for their picnics and their family life. I became interested; I approached them; they did not mind being photographed. In time, they invited me to their homes, to their restaurants and shops, to the streets they were living in. . . . Being in their homes was not even mainly about photographing. They had questions to ask, stories to tell; they had forms that needed to be filled out. I felt their strong wish to be accepted, to become integrated, to belong. And it was me who felt accepted and integrated. The friendliness with which they treated me, although I was not a member of their group, was really overwhelming". In Candida Höfer and Giovanni De Riva, *Candida Höfer Speaks with Giovanni de Riva* (Madrid: Fundación Telefónica: La Fábrica, 2007), 50.

[84] DaPonte, "Candida Höfer's Türken in Deutschland as 'Counter-Publicity.'"

documentation and invites an elaborate reading of the image. In the photograph of the Turkish men in suits smiling back at her through the shop window, her reflection is clearly visible on the window as she is taking the photograph. Here, Höfer places herself among the Turkish people, surrounded by all the objects of the shop and its decorations, while at the same time making visible the urban context behind her that is also being reflected. It is a multi-layered representation that immediately relates to the situation in which cultures and nationalities are blended in 1970s Germany, alluding to the recognition of this situation not only by its capture with the camera, but also by the further active participation of the German photographer.

Figure 89. Candida Höfer, Volksgarten Köln I 1974, 1979, gelatin silver print, 18.7 x 27.8 cm.

Figure 90. Candida Höfer, Volksgarten Köln II 1974, 1979, gelatin silver print, 18.7 x 27.8 cm.

The photographs in the collection range between openness and reservation. In *Volksgarten Köln I 1974/1999*, Höfer photographed six Turkish women and a young girl who were having a picnic in the park. The women seem joyful and are laughing at something Höfer has told them. It is a family

portrait that also portrays something of the photographer: she becomes a participant in this shot even though she was behind the lens. Other photographs, on the other hand, are more distanced. In *Volksgarten Köln II 1974/1999* the men seem to ignore or be unaware of the photographer as they set up their picnic, while the women sitting in front of the tree stare back at the camera with a reserved look. From the perspective of the young photographer, camping in the park is behaviour that sharply diverges from Western European or German codes of conduct and thus attracted attention as a peculiarity.[85] There are also candid shots of people going about their everyday lives seemingly unaware of their photograph being taken, such as the women and children washing the car in *Eifelstraße Köln, 1973/1999* and of rooms that portray the cultural identity of the Turkish immigrants. These interior shots focus as much on the people as they do on the surrounding environment. In *Eckermannstrasse Hamburg, 1978* a Turkish vendor is photographed in his shop, posing behind the counter, in front of shelves with orderly stacked cans. On the counter olives are for sale, a type of food that was out of the ordinary in Germany at the time, which, combined with the patterned wallpaper adorning the wall, creates an exotic atmosphere. Other shots are entirely devoid of people: *Keupstrasse Köln III*, 1977 is a photograph of a butcher's shop displaying everything that would be found in a German butcher's shop, but with a Turkish context. The arrangement of the goods, the furnishings, the decorations are all shaped by the cultural identity and experiences of the Turkish owners' native country.

Figure 91. Candida Höfer, Eifelstraße Köln, 1973, 1999, gelatin silver print, 18.9 x 28 cm.

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[85] Burcu Dogramaci, *Heimat Eine Künstlerische Spurensuche* (Köln: Wien Böhlau Verlag, 2016), 62.

Figure 92. Candida Höfer, Eckermannstrasse Hamburg, 1978, gelatin silver print, 18.7 x 27.9 cm.

Figure 93. Candida Höfer, Keupstrasse Köln III, 1977, gelatin silver print, 18,2 x 13,6 cm.

The black-and-white method of documentation for this project lasted for only a year; in 1973 Höfer took a very different approach to photographic presentation, with the use of colour slide projections. Influenced by Ole John and his film course at the Kunstakademie, she was encouraged to combine her photographic background with her interest in film while continuing her exploration of documenting and studying Turkish immigrants.[86] This marked Höfer's turn to colour photography and experimentation with photographic projection.[87] In this work, the slide projections[88] become a part of social discourse and a spatial intervention. The use of image projection is a medium that Höfer has quite deliberately returned to periodically throughout her work.[89] Beginning as an exploration prompted by her film studies, she sees the projected image not as an alternative to photography, but as "a counterbalance to the weight that static wall pictures can assume in an exhibition. A projection prescribes the sequence of images—but can never completely dictate the viewer's perception, for viewers can begin watching it or walk away from it at any point in the sequence." The projected image deals with time and movement, creating a closed loop of visual performance that can be disrupted, witnessed partially, and which is always dependent upon its temporal nature.

A book does the same. And there as well the author cannot control the sequence. That is up to the reader. In addition, a projection is comparable to the fleeting nature of our own seeing, but at the same time provides an opportunity to pause for a moment. And that too is a quality of everyday seeing. However, the images, if they are large and hang low, can only invite one to look. At least as a form of presentation

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[86] The black-and-white photographs kept their original individual titles; however, the new shots were compiled untitled into the final edited eighty-image slideshow that was titled *Türken in Deutschland.*

[87] Through the projection the photograph may be altered to a variety of scales as it is projected on the wall. This practice might have had an additional influence on Höfer's later adoption of the large-format tableau photograph.

[88] Slide projections were an avant-garde medium that was already being utilised at that time in Düsseldorf by artists such as Imi Knoebel and Otto Piene, among others. Höfer also met the American artist Dan Graham, who often visited Düsseldorf and had an interest in photographic projections: Höfer photographed him at one of his shows. Susanna Kumschick et al., *Candida Höfer: In Ethnographischen Sammlungen* (Köln: Walther König, 2004). Projection already held a historical importance at the Kunstakademie Düsseldorf: Piene was one of the first German artists to use the medium in the 1950s – he created the artist group Zero alongside Heinz Mack and Günther Uecker. Piene experimented with light projections on interior surfaces by shining light from moving lamps through punctured surfaces and grids, which he called *Lichtballeten* (Light Ballets), creating a stimulating experience of the space. "Otto Piene: Light Ballet," Sprüth Magers, Berlin, 2017, *Galleries Now* https://www.galleriesnow.net/shows/otto-piene-light-ballet/. Both Piene and the Zero group had acquired great influence by the late '60s and this led to the emergence of the international viral ZERO movement. Anette Kuhn, *Zero*: *Eine Avantgarde Der Sechziger Jahre* (Frankfurt am Main; Berlin: Propyläen Verlag, 1991).

[89] A recent demonstration of this was seen at the exhibition "Candida Höfer: Nach Berlin" at Neuer Berliner Kunstverein, Berlin, 2017, where she presented her work *Memories 2016* and *Berlin 2016*, some of the first works by Höfer to use digital photography, which she presented as digital slide-projections.

they offer a way of looking that is not between merely a fleeting registration and pausing, but rather between a mere glance and close study, if the viewer's patience permits it.[90]

Between the '60s and '70s the medium of image projection had a substantial presence in the Düsseldorf artistic scene, both preceding and during Höfer's utilisation of it.[91] Höfer exhibited both the photographs and the slide-show projections in several galleries in Düsseldorf, in Cologne and in cities nearby between 1975 and 1982; they have recently re-emerged for the first time, and were exhibited in Turkey in 2018.[92] The photographs depict people as individuals and as part of larger communities in their everyday life, whether in their private spaces, their workplace or outdoor public areas. The projections had the additional effect of creating an intensity in the projected images and by accentuating the artistic discourse of visual curation. Therefore, the photographs that Höfer took after 1973, being in colour, had an increased impact on the audience with their realistic representation of everyday people in their everyday local lives. These images present their cultural context and their social presence, a presence that was in contrast with West German culture, and that the West German media of the 70s was avoiding or misrepresenting. Höfer takes a position against the silencing of a people that were as much part of West German society as the rest of the population, and their negative stereotypical representation in the media. The use of projection functions as means of approaching her audience and instilling in them the seriousness of the social issue. Through her straightforward shots,

[90] "Alex Hubbard 'Urethane Paintings' and Candida Hofer 'Closer' at Galerie Eva Presenhuber, Zurich," *Mousse Magazine*, 1 January 2015, http://moussemagazine.it/hubbard-hofer-presenhuner/.

[91] Höfer found herself in a climate of artistic experimentation through projections with artists such as Otto Piene and Imi Knoebel (a contemporary of Gerhard Richter with whom Höfer was in contact during her studies at the Kunstakademie), both students of Joseph Beuys. While Piene was experimenting with light projections through perforations, Knoebel focused on the use of slide projections using the rotary tray to project slides of ink-lined paintings. Knoebel experimented with various projection mediums and his *Innenprojektionen* (Interior Projections; 1968–1970) made him the first of Beuys' students to use photography as an independent art form. In Jörg Heiser, "Pleasure Series: Seriality and Color in Knoebel's Work," *Deutsche Bank AG Art Mag* 55 (June 2009), https://db-artmag.de/en/55/feature/seriality-and-color-in-knoebels-work/. This work was a series of black-and-white photographs that were created from empty slides designed with empty squares that allowed the light to pass through, changing through the use of the slide carousel, a novelty at the time, and which were projected on dark walls or in dark rooms. These photographic series are very similar to the photographic "building cuts" by Gordon Matta-Clark, which he was working on during the same period. In Antoni Gelonch, "Imi Knoebel," *Gelonch Viladegut Collection*, accessed March 16, 2019, http://www.gelonchviladegut.com/en/autor/imi-knoebel/. Knoebel transformed these projections further in his project *ProjectionX*, 1972 by projecting them outdoors, experimenting with the locations of projection and also by animating them through video projections instead of using the slide carousel. The projections were then transformed into an urban experiential art installation that dealt with the subject of the gallery versus urban space and the projected image on various urban surfaces.

[92] "Candida Höfer, Time, Places and Spaces," Dirimart, Istanbul, 2018, *Artsy*, https://www.artsy.net/show/dirimart-candida-hofer-time-places-and-spaces

with equal emphasis on the subject and the environment, she created a clear and impartial documentation of a commonplace situation that was communicated to the West German population through this artistic discourse.

Her objective approach created two different views of the Turkish situation that are seen in the two series respectively. On one hand, in *Türken in Deutschland* and *Alltag in der Türkei* the hospitality Höfer received is evident: she gained entrance to shops and houses and photographed the Turkish community.[93] She presented a side that was not visible to everyone and displayed a familial view of the strangers she encountered on the streets. On the other hand, in her photographs of Turkish people in open public spaces in Germany, Höfer presented a situation that was generally absent in the mainstream media. She presented the new city-dwellers as they occupied the urban environment. This emphasised their foreignness and the unfamiliarity of the occurrence and questioned the position of the photographer as part of the scene and as an outsider. This latter work carries a more investigative approach to issues of migrations and socialisation in the urban context and the position of the audience towards the scene presented.

In 1975, Höfer exhibited the projections at Konrad Fisher's Neubrückstraße gallery in Düsseldorf among other local and renowned artists.[94] The gallery and the restaurant formed a hub that housed various artistic events and attracted artists and audience interested in the artistic scene. The Creamcheese club, in particular, became a Gesamtkunstwerk that has since remained part of the art history of Düsseldorf.[95] Fischer hosted exhibitions by emerging artists, including Höfer. Through a double slide projection at the entrance of the gallery, she presented colour photographs side by side, those on one side showing the Turkish community in Germany and those on the other side showing Turkish people in Turkey. The people passing by the gallery or visiting the neighbouring Creamcheese club[96] could see the projections, thus, similar to Imi Knoebel,[97] infiltrating the urban environment and creating an artistic and political intervention.[98]

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[93] This was not something she was able to accomplish with German shopkeepers. Ela Kacel, "Identities Become Visible in Public Space," in *Migration, Stadt Und Urbanität*: *Perspektiven Auf Die Heterogenität Migrantischer Lebenswelten*, ed. Thomas Geisen, Christine Riegel, and Erol Yidiz (Wiesbaden: Springer, 2017), 411.

[94] The gallery was located near the Creamcheese club, a site designed by Günther Uecker modelled on Andy Warhol's club *The Dom*. Gislind Nabakowski, "WAS Not Tut," *Heute Kunst*, no. 14–15 (1976), 27.

[95] Antonia Loick, *Was War Los in Düsseldorf 1950-2000* (Erfurt: Sutton, 2000), 44.

[96] Alex Needham, 'Dusseldorf Disco Comes to the Guggenheim as Creamcheese Matures', *The Guardian*, 17 November 2014, sec. Culture, https://www.theguardian.com/culture/2014/nov/17/dusseldorf-disco-creamcheese-krautrock-zero-movement-guggenheim.

[97] See previous footnote 91.

[98] It is worth mentioning here that Bernd and Hilla Becher were also exhibiting at the gallery during the same period and it was through this that they became acquainted with Candida Höfer. Stefan Gronert, *The Düsseldorf School of Photography* (New York: Aperture, 2010), 25.

Figure 94. Candida Höfer, Diaserien, 1977/1980

As well as being shown in the exhibitions, the *Türken in Deutschland* photographs also circulated through the *Diaserien*, a series of published small booklets of text which each held twelve slides from the *Türken in Deutschland* and Al*ltag in der Türkei* series. These were sets of slides that were accompanied by informational texts by sociologists, commissioned by the artist. The *Diaserien* were produced with Gudrun Wasmuth and Elise Kentner, *Alltag in der Türkei* in 1977 and *Türken in Deutschland* in 1980.[99] The publications were distributed in schools and community centres in an effort to educate the local West Germans and familiarise them with the changing societal structure. It acted as a challenge to the general approach of the West German state which was advocating the segregation of the immigrant communities by limiting their visibility and or using them to promote specific policies and ethnic stereotyping. The booklets, unlike the projections, were aimed at an audience that was less involved in the arts and therefore would not have seen the slide projections. Instead, Höfer included some of the slides in the publications so that the readers could project the photographs themselves. The booklets were distributed in schools, and the three authors also projected

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[99] Candida Höfer, Gudrun Wasmuth, and Elise Kentner, *Alltag in Der Türkei* (Cologne: Vista Point Verlag, 1977); Candida Höfer, Gudrun Wasmuth, and Elise Kentner, *Türken in Deutschland* (Cologne: Vista Point Verlag, 1980).

the work in classrooms to initiate discussions with the children about their cultural differences and their feelings about them. The booklets, while focusing on educating and informing the West German public about Turkish customs, culture and history, were also intended for Turkish people living in West Germany as means of understanding their position in relation to West German society. They used photography as an initial point of communication between people who often did not speak the German language while at the same time the sociological texts engaged the more educated public in discourse about the Turkish minority community. In terms of assessing the significance of Candida Höfer's work, the *Diaserien* booklets constitute one of the most political and direct approaches to social issues in the urban environment to date, combining art, sociology and activism. Yet, it is also one of the least-known works by the otherwise prominent artist and has been dismissed by many scholars as a failed exploration.[100] Considering the three series discussed earlier, it is evident that these initial approaches in *Diaserien* established the groundwork for further investigation of the social subject through the photographic medium. The *Türken in Deutschland* series was in fact the work that earned her a place in Bernd and Hilla Becher's first group of students at the Düsseldorf School of photography, and the influence of Höfer's tutors on her practice, as well as her initial investigations, have undeniably contributed to her significance as an artist and photographer.

Looking at Candida Höfer's work today, a considerable shift between the work produced before her studies at the Düsseldorf School of photography and the projects she undertook afterwards can be observed. Her education under the Bechers played a significant role in the process and outcomes of her photography practice today, but they also reframed the approaches and concerns the artist had already developed before her studies began. The work already showed signs of the objective, documentary approach that was being explored by the Bechers. However, as historian Astrid Ihle points out in discussing a selection of Höfer's photographs, the development of the artist's methodology before and after her study with the Bechers is noticeable.[101] While her initial photographic work was already exploring ideas that resonated with the approach of the Düsseldorf School of Photography, it lacked the clarity and discipline that later defined the School's approach. Still, it illustrates the diverse and unique trajectory that distinguishes Höfer's work from that of the Bechers' other students and her long artistic development from her first series up to the present, including her experimentation with the medium. A distinctive aspect of Höfer's background was her studies in film. As seen in her *Türken in Deutschland* series, her prints and projections show an interest in experimenting with the temporality of the photographic medium and its relation to space. The scale of the image, the surface of the projection and the durational alternation between the images allowed her to study the photograph from a different perspective in relation to the other

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[100] DaPonte, "Candida Höfer's Türken in Deutschland as 'Counter-Publicity.'"

[101] Astrid Ihle, "Photography as Contemporary Document: Comments on the Conceptions of the Documentary in Germany after 1945," in *Art of Two Germanys: Cold War Cultures*, ed. Stephanie Barron and Sabine Eckmann (New York: Abrams, 2009), 186–205.

"Düsseldorfers". It can thus be surmised that Höfer's interest in subject and critique in her continuing experimentation has remained unaltered: her approach and methodology are the elements of her work that are continuously reworked and refined to better express the fundamental aspects of absence and presence in space and their intrinsic link to its social nature. Observing the spaces in her *Türken in Deutschland* side by side with the ones depicted in *Architecture of Absence* the visual methodological discrepancies are strikingly obvious, yet equally clear is the continuing social investigation of such architectural spaces (which, although they have a less directly activist character are nonetheless critical), their public nature and role and the way they offer an enduring link with the people that occupy them.

Thomas Struth's Museums

Figure 95. Thomas Struth, Pergamon Museum IV, Berlin, 2001, chromogenic print,
153.4 x 228.8 cm. © Thomas Struth. All rights reserved.

Positioned in antithesis to the *Architecture of Absence* series is the work of one of Höfer's fellow students at the Kunstakademie, the contemporary artist Thomas Struth. Another student of the Bechers, Struth has much in common with Höfer, including his photographic explorations and his diverse education before attending the Düsseldorf Kunstakademie. Born in 1954, in Geldern, Lower Rhine, Struth began training at the Kunstakademie Düsseldorf in 1973. He first studied painting under Peter Kleemann, and a year later under Gerhard Richter, before finding that his interests lay in

photography and he joined the Bechers' photography class between 1976 and 1980.[102] His talent earned him a one-year scholarship to New York City in 1977, where he became resident artist at PS1 in Long Island City. During that time, he created a number of series of cityscapes (which he had already begun working on a few months earlier in London, assisted by Axel Hütte), of which the series *Streets* brought him his first international recognition.[103]

Figure 96. Thomas Struth, Dey Street, Financial District, New York, 1978, silver gelatin print, 66 x 84 cm. © Thomas Struth. All rights reserved.

In *Streets* Struth follows the Bechers' strict methodological approach, using a classical composition and central perspective in black and white to portray the urban public spaces of New York. The scenes are distinguished by a stillness and are devoid of people, evoking a powerful sense of place. There is both a vagueness of locality and detailed observation of the architecture that only becomes noticeable on a second reading. Moreover, the point of view places the audience in a panoptic position, seeing as far as the eye can reach, a view facilitated by the lack of figures; *"as with most of Struth's cityscapes, there is an initial disorientation, a compound of absolute specificity of place and seeming arbitrariness in point of view".[104]* Struth continued these explorations in his next series, *Unconscious Places*, that were created over many years into the 2000s and are a reference to

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[102] Gronert, *The Düsseldorf School of Photography*, 35.

[103] Richard Sennett, *Unconscious Places* (Munich: Schirmer/Mosel, 2012); Kunstmuseum Bonn, *Thomas Struth, Strassen*: *Fotografie 1976 Bis 1995* (Koln: Wienand, 1995).

[104] Peter Schjeldahl, "Thomas Struth," in *Columns & Catalogues* (Great Barrington: The Figures, 1994), 84.

Stephen Shore's *Uncommon Places.*[105] While they have a predominantly urban focus, this series expresses an interest in the relationship between human presence and space and have attracted the interest of sociologist Richard Sennett and architect David Chipperfield, both friends of Struth's, who have written about his work.[106]

Figure 97. Thomas Struth, Art Institute of Chicago II, Chicago 1990, chromogenic print, 184 x 219 cm. © Thomas Struth. All rights reserved.

Struth continues to navigate the different perceptions of humanity in space in his series *Museums*. Since 1989 he has been taking photographs of exhibition galleries in museums, inspired by his 1987 portrait that Struth made of the art historian Giles Robertson at home in front of a wall on which two portrait paintings are hung.[107] Like the portrait, the photographs in Struth's *Museums* series are constructed through a layering of artefacts and people, disengaged from any psychological depth, leaving the audience to concentrate on appearances. One of the best-known photographs in the series

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[105] Hugh Campbell, "Unconscious Places: Thomas Struth and the Architecture of the City," in *Architecture and the Unconscious*, ed. John Shannon Hendrix and Lorens Holm (Burlington: Ashgate, 2016), 137–49.

[106] Richard Sennett, "Thomas Struth's City," in *Common Ground - A Critical Reader*, ed. David Chipperfield, Kieran Long, and Shumi Bose (Venice: Marsilio Editions, 2012), 49–62.

[107] Werner Wolf and Walter Bernhart, *Metareference across Media*: *Theory and Case Studies* (Amsterdam: Rodopi, 2009), 356.

is *Art Institute of Chicago II 1990*, depicting a woman with a buggy in front of Gustave Caillebotte's 1877 painting *Paris Street; Rainy Day*. The composition of this photograph resonates with the subject of the main painting, making the viewer seem as if they are a part of the Paris street, while the other visitors complement the setting. The photograph's scale, 136.8 x 175cm, serves to emphasise the depth of the effect and repeats it in relation to the photograph and the audience as they gaze at it in the gallery (a meta-picture effect). Throughout Struth's series the museum visitors become more of an artefact themselves, and as the people lose some of their humanity the artefacts gain in vividness.

These photographs, although *"never staged",[108]* are the result of a meticulous orchestration of the composition that comes as a result of patience, numerous photographic captures and a careful selection of the right moment. Despite this, "his museum pictures are wittily theatrical apostrophes of the 'art-space' situations in which they are displayed".[109] This theatrical stasis, the frozen expressions of the visitors and their positioning among the exhibits are only augmented by the objectiveness of his photographic eye. Struth's training in painting becomes obvious when the compositions of his photographs resonate with those in the classical paintings he depicts, and it is here that the contrast between presence and absence, between Höfer and Struth, is most evident.

Struth's *Museums* series can be regarded as research into the "attitudes and the very act of observation itself in relation to the paintings".[110] They are a social and human analysis of how people relate to space and the artefacts inside it. Yet this observation, in its most objective execution, dehumanises the subject and makes it something other. At the same time, the gallery becomes a negative space, separated from reality and resembling even more clearly the composition of a painting. In essence, the human presence further detracts from the vividness of the space and, through Struth's emphasis on creating a photographic depiction of reality by following an "objective" tradition, begins to border on the surreal. In contrast, Höfer succeeds in giving life to her spaces and suggests presence without depicting people. In her images, space itself is animated and gives prominence to the role of architecture as an element of a social context.

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[108] Gronert, *The Düsseldorf School of Photography*, 37.
[109] Schjeldahl, "Thomas Struth," 84.
[110] Gronert, *The Düsseldorf School of Photography*, 38.

Figure 98 Thomas Struth, Audience exhibition, installation view, Marian Goodman Gallery, New York, 2005

Figure 99 Thomas Struth, Audience 07, Florence 2004, chromogenic print, 179.5 x 288.3 cm. © Thomas Struth.

Struth's interest in this technique of "dehumanisation" continues in his 2004 series *Audiences*. Executed during his *Museums* series, *Audiences* transposes art and people, presenting the audience from the viewpoint of the artwork. For example, part of his series is taken in the Galleria dell'

Accademia in Florence, in the room in which Michelangelo's sculpture of *David* is exhibited. By placing the camera below the sculpture, Struth presents the facial expressions of the viewers from the perspective of *David*.[111] Thus, he emphasises the role reversal between people and artefacts. The landscape format, measuring approximately 179.5 x 288.3cm, creates a viewing experience that is depictive rather than inclusive.[112] In conjunction with the rest of the *Museums* series, *Audiences* demonstrate that it is not always people that can infuse a space with life, and in fact on some occasions their presence can detract from it. Their indolent roaming in the galleries, their statue-like posing and gazes that range from boredom to awe construct an image of stagnation and lifelessness that is in complete opposition to Höfer's spaces of absence, which in fact portray more presence than the crowded museum galleries.

The antithetical results that are presented respectively in the *Architecture of Absence* and *Museums* series present a range of different photographic and compositional methods and methodologies that can express this experience of space in relation to the human presence. The scale of the photograph, its positioning in space, the use of perspective and the angle of viewing, the use of colour, light, and the portrayal of materials, as well as the composition of the photograph and the scene are just a few of the "tools" applied to produce what is ultimately a space of experience. The contradiction of space and humans, especially in these two cases, is particularly engaging; on the one hand Höfer achieves a humanisation of the space, while Struth offers a dehumanisation of the human body. Photographically, these portrayals break down these spatial arrangements and interactions and produce a guide by which such experiences could be recreated in real life. Architecturally, they signify the role of the human being in space, not only physically but also as an action or a metaphor, and through their architectural relevance these photographs prompt a re-evaluation of architecture's direction. In relation to both disciplines, however, they act as an analysis, and perhaps as a critique, when viewed together, of the role of the observer and of the human presence in the architectural space.

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[111] "Thomas Struth: Capturing Audiences," *Huxley-Parlour.* Accessed February 2, 2019, https://huxleyparlour.com/thomas-struth-capturing-audiences/.

[112] When exhibited in the gallery, as shown in the triptych at the Marian Goodman Gallery in 2005, the photograph transforms into a scene showing an extension of the gallery space where time and life is frozen.

Kuehn Malvezzi: curating space, curating "socialness"

Figure 100. Installation view of Kuehn Malvezzi, Komuna Fundamento, 13th International Architecture Biennale, Padiglione Centrale at the Giardini, Venice, 2012, (photograph by Giovana Silva)

The subject of absence, as expressed in Höfer's work, comes full circle through her collaboration with the architectural practice Kuehn Malvezzi. Created after Höfer's collaboration on projects with architects such as David Chipperfield and Herzog & de Meuron, the work produced during this collaboration is distinguished by its direct relation to the photographic learnings expanded upon previously and their application through the medium of architecture, resulting in an extended investigation of space that goes beyond its physical boundaries, and, most importantly, its disciplinary boundaries. This collaboration presents a perfect example of a context in which ideas in architecture and photography are exchanged reciprocally in response to common concerns and investigations. The progressive journey of this joint exploration will be seen here in some key works, including architectural projects and exhibitions, exploring the architectural response that the photographic work received during this process, the learnings gained from a collaboration such as this, and the joint benefits for both participants.

The artist's relationship with the architectural network crystallised at the 13th Venice Biennale of Architecture in 2012. Responding to David Chipperfield's call for an exhibition on the subject 'Common Ground', the Kuehn Malvezzi office responded with "Komuna Fundamento", in collaboration with Candida Höfer and another photographer, Armin Linke. The exhibition was

constructed as two interventions, one at the entrance to the Palazzo delle Esposizioni and one inside the Sala Chini. Using grey stack-bond brickwork, the architects created spaces that invited people to gather, walk around and experience the contributions of the photographers. The photographs interacted with the space by creating a relationship between visual architectural space and its physical construct. Both Höfer and Linke work with the subject of space, but from different approaches, therefore generating a further level of discourse between their photographs and the identity of architectural space (as a social space or otherwise). Kuehn Malvezzi see architecture as "part of a curatorial action in space that is neither foreground nor background, but a transformative medium of the in-between",[113] enhancing the role of architecture as an experience of interior space that is further supported by the collaboration with the photographers.

The Biennale was only one of several occasions where Kuehn Malvezzi's architecture and Candida Höfer's photography have met within a curatorial context, presenting an interdisciplinary medium for exploring certain aspects of architecture. Their collaboration, having begun in 2002, has continued for almost twenty years, bridging these two practices towards a common exploration of spatial concerns. The investigative collaboration often transpires within a curatorial practice such as joint exhibitions,[114] but also as commissions that appear to go beyond a simple photographic documentation and are reminiscent of the conceptual partnership between Aldo Rossi and Luigi Ghirri.

> There is hardly a magazine or newspaper column that illustrates architecture
> taking the user into account; that furnishes news about how architecture
> really functions in its daily existence; that publishes images, photographs or
> articles in which the people who use, transform, and recompose the three-
> dimensional physical organism which they have been given are actually
> present. It is as if architecture were merely a potential space and not an actual
> place, concrete, made of real materials, and inhabited by people in a
> permanent and continually changing relationship.[115]

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[113] Francesco Garutti et al., Komuna Fundamento: [Kuehn Malvezzi] (Milano: Mousse Publishing, 2012)

[114] Examples include: documenta 11 in Kassel, 2002; Schloss Morsbroich, 2008; 13th Venice Biennale, 2012, etc.

[115] De Carlo, 'Architecture's Public', first published in *Parametro* 5, 1970, reprinted in Zucchi 1992 and in Peter Blundell Jones, Doina Petrescu, and Jeremy Till, eds., *Architecture and Participation* (London: Routledge, 2005), 3-22.
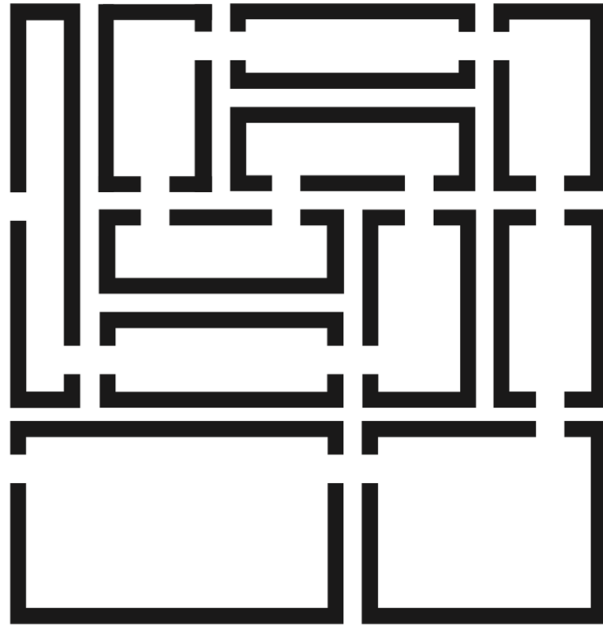
Figure 101. Kuehn Malvezzi, Binding Brauerei Kassel, 2002

Figure 102. Candida Höfer, Binding Brauerei Kassel V 2004, chromogenic print, 180 x 146 cm.

In the joint publication *Candida Höfer: Kuehn Malvezzi* (2009), the projects presented by both architects and photographer present a cohesive vision and a combined investigative process that complements each other's unique backgrounds. Perhaps the most striking of the projects, which with good reason provided the foundation of this long collaboration, is their work at documenta 11 in Kassel. The project took place at the Binding brewery, an old industrial space, where the designers followed a circulation-centric approach that focused on the experience of the space by taking into account the architectural elements and the curated works. The design had the human presence at its core, implementing the movement of the visitor as a mode of narrating the space. The visitor could choose between a natural flow or a direct course, which the architects titled as *En suite* and *Shortcut,* to create their own narrative of the exhibition. The photographs of the space portray this choice in a very direct manner, representing either one-way corridors or optional openings of digressions utilising light and darkness to draw the visitor in or make them question their course. All the projects in the publication are followed by graphic line drawings depicting the spatial arrangements in abstraction. In combination with the photographs, the points of access become sources of light and the cut walls turn into white surfaces, presenting multiple possibilities to host the exhibits, while the ground and the ceiling present a balance of both light and navigation. The circulation sometimes feels forced, especially when traversing the very long, narrow corridors that have few openings. This is expressed

in the photographs of these corridors where the walls, despite their lightness, become oppressive from the sides and the dark floor and ceiling turn into a dark strip, the architectural elements of the brewery such as pipes and trusses perceptively contributing to elongating the pathway through their linearity.

Figure 104. Candida Höfer, Rieck-Halle Berlin IV 2004, chromogenic print, 152 x 152 cm.

Figure 105. Candida Höfer, Rieck-Halle Berlin III 2004, chromogenic print, 155 x 143 cm.

Figure 106. Kuehn Malvezzi, Schirn Kunsthalle Frankfurt 2005

Figure 107. Candida Höfer, Schirn Kunsthalle Frankfurt II 2005, chromogenic print, 150 x 143 cm.

Later projects appear to expand the ways in which this circulation is approached, through various means of utilising the space and light. In one example, the Rieck-Halle Berlin, a museum extension for the Friedrich Christian Flick Collection, a similar industrial site is presented where the implementation of light uses contrast and the circulation to promote a seriality in the narrative through more open spaces, wider access points and linearity in their traversal. The architects also explored other forms of flow, such as in the Schirn Kunsthalle in Frankfurt in 2005. Implementing a rather serpentine arrangement, the exhibits are organised within various niches that are occasionally

interrupted by openings. These openings allow more light to enter, thus avoiding the "long and dark" corridor effect, as well as enabling a feeling of orientation. Most of all, though, they present an opportunity to rethink the visitor as part of the space. As the architects describe, these openings become a stage, framing the visitors and as a result incorporating them in the experience of the space. Despite the fact that neither the photographs nor the drawings are populated by figures, the consideration of the human presence is seen to be beyond depiction and instead becomes a skilful manipulation of space and its elements that respond to the visitor through their vision, tactility or movement.

Figure 108. Candida Höfer, Binding Brauerei Kassel I 2004, chromogenic print, 155 x 155 cm.
© Candida Höfer. All rights reserved.
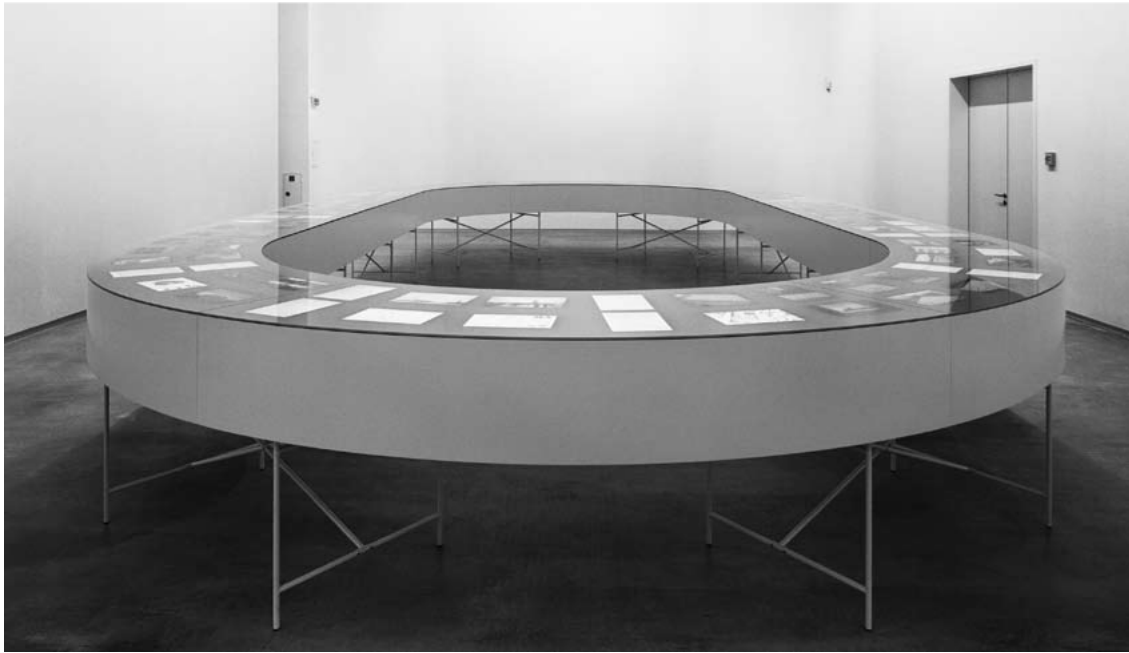
Figure 109. Kuehn Malvezzi, Momentane Monumente, Berlin 2005

In 2005 Kuehn Malvezzi revisited their 2002 Binding Brauerei project in the exhibition *Momentane Monumente* at the Berlinische Galerie in Berlin.[116] The exhibition presented material from eleven past projects, both conceptual and realised, through drawings, archive material, photographs, and other materials. The set-up focuses on presenting the material for a review of the practice's architectural journey, additionally touching upon questions of process, approach, and architectural exhibition. A single image is hung on the walls, a photograph by Höfer showing the Binding brewery after the exhibition for documenta 11 was taken down two years later (Fig. 104). The photograph shows the space in disarray, the walls crumbling, their white paint falling off, the floors covered in dust and debris. Following Höfer's technique, the photograph is taken using a single-point perspective with a square frame. The light is the protagonist in this photograph, with a bright square at the centre of the image coinciding with the central point of perspective, alluding to either a door or a window, and the light filtering through it pronouncing the altered state of the materials through a tactile presentation. Because the photograph was taken after the end of the exhibition it represents an invested curiosity in the altering state of the space, its temporality, and its link to the human presence, or, as it happens, its lack thereof. Presented in the current exhibition, it represents a critical review of architecture and the issues of time, space and presence discussed above. It also demonstrates that the collaboration between Höfer and the Kuehn Malvezzi practice delves deeper into a critical analysis and exploration of these subjects.

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[116] Simona Malvezzi and Johannes Kühn, "Momentane Monumente," in *Displayer* 01, 2007, 137–42.

Okwui Enwezor, artistic director of documenta 11, comments on the work and the collaboration between Candida Höfer and Kuehn Malvezzi, recognising a turn in Höfer's usual approach to architectural photography that was predominantly typological and archival. Instead, beginning with this collaboration, her approach foregrounds aspects that she had been looking at in the past but that were overshadowed by this earlier methodology. Her photographs focus here on the "traces, the remainders of the evacuated archive", transforming the space into a "representation" of these traces.[117] Enwezor emphasises this anthropological aspect of the work, that becomes particularly clear in Höfer's photographs. The exhibition space, inherently associated with the human presence and its interactions with the space and the exhibits, belongs to these typological spaces that Höfer has explored and finds in this collaboration a fertile site for further exploration of these spatial qualities. Her "seeing" of the space expresses the architects' concept of the architecture structuring the exhibition and the curatorial experience and acts as an extension of both the architectural work and the curatorial project. It enriches the experience of the space and preserves it through time, not only as a documentation of the built space but also as its own conceptual expression.

The architects' process of designing not only the space but also people's movements and experience finds a clarity in Höfer's photographs that is reflected back to the architects, supporting, and reinforcing their vision. They respond to the design of the exhibition space through notions of circulation, navigation, and social space (Enwezor compares these to urban design), creating in the end a journey of ideas and experiences that remains with the visitors long after they leave. While this design and process has its own architectural value, the practice of photography here allows this to be reviewed and re-conceptualised. On the one hand, the post-event state of the design, a fact that is not often considered or addressed, brings this temporary project back into the discourse, revisiting it from new perspectives and within a new context of time. The 2004 photograph challenges the role of exhibition and temporal design, the role of human activity in completing the architectural space, the interchangeability of concept and realisation, and the lifespan of a project. On the other hand, the role of photography in this case acts as a force that allows the re-evaluation and investigation of concepts that do not have a clear representation. In the "Momentane Monumente" exhibition the architects displayed photographs by Ulrich Schwarz on the table: Schwartz has for many years documented the office's work and his photographs offered a detached view for a "clean" documentation of the work. In contrast, Höfer's photograph of the "ruin" represented an autonomous view: it was not illustrative of anything but the narrative.[118] Drawings, diagrams and sketches are one way of expressing space, and so is photography, but the anthropological and social nature of architecture becomes a value that

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[117] Chris Dercon, Okwui Enwezor, and Axel Sowa, *Candida Höfer: Kuehn Malvezzi* (Köln: Buchhandlung Walther König, 2009).
[118] From author's conversation with Wilfried Kuehn.

is not "viewed" but is "seen" through Höfer's photographs.[119] This makes the collaboration between Höfer and Kuehn Malvezzi all the more fruitful, for both parties seem to be deeply invested in this anthropological architecture.

Figure 110. Candida Höfer, Lauder Business School Wien III, 2004, chromogenic print, 200 x 273 cm.

Kuehn Malvezzi's office walls in Berlin hosts multiple photographs of their projects, by Höfer and others. In the office entrance, the photograph of the Ludier Business School in Vienna takes up most of the wall (measuring approximately 200cm by 2.73 cm) and imperceptibly appears to lead to a connecting room, that of the Vienna school. Their work is often influenced by art, and many of their projects have, in one way or another, an artistic affiliation. For Wilfried Kuehn the distinction between space and image is important in that they are different things and each has its own role. Discussing Carlo Mollino's work (specifically his photographic manipulations and edits), Kuehn is intrigued by photography's ability to "create a narrative", one that can be as close to reality or stray as far away from it as possible. In this context, the constructed narrative can draw upon notions and present them in relative clarity to the viewer. So, in Höfer's "ruin" of the Binding brewery the hinted-

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[119] By this I refer back to Jonathan Crary's definition of observation (that differs greatly from 'viewing') and John Berger's "ways of seeing" that was explored in the chapter of this thesis entitled "A Brief Overview of Photography and its 'Seeing'".

at absence, through the obvious abandonment of the space, reminds the viewer of the anthropological context of the space. Seeing this photograph in conjunction with other photographs from 2002 further strengthens this notion.

Kuehn emphasises that photography cannot represent space accurately and that real architectural space cannot be substituted by a photograph, yet photography may allow the viewer to see this space through different eyes. The practice uses photography as a means to revisit earlier projects and explore spatial and architectural concepts. Its relationship with photography ranges from technical to conceptual as well, employing photography as a documentation and archive, to the extent of using it to create and curate artwork.[120] All in all, though, photography holds a strong presence as a means to think and research, and its captivating presence in their space of work appears to have a strong influential role. Visiting their work and seeing the photographs by Höfer there are links in the implementation of framing, light and materials that together reconstruct an anthropological space ruled by moments of fluidity, sociality, and narrative.

Conclusion: Seeing beyond absence

Architecture is distinguished from other spatial practices by its link to the human body, its design by and for people. This relation, however, does not always precipitate the creation of spaces that permit or encourage human presence. Whyte's research presents several examples where attempts to design public and social spaces have unexpected results in their reception. These examples, and the research as a whole, put forward the issues that arise when people are expected to conform to the intended design instead of the space being designed for people, but most importantly illuminate the layered nature of human presence that might present itself through complex values that are based on aesthetics and atmosphere, or simple ones that are guided by fulfilling basic needs such as resting or finding shade. Reviewing this research that took place half a century ago shows that there is never a golden rule for designing a public space successfully, and the need to revisit and re-evaluate these spaces is a necessary process for further learning.

Photography may provide a practical medium for this revision through documenting and archiving; however, it is seen to have much further capacity in expressing notions that correspond to the more complex values that define human presence. Höfer's work represents a timeline of continuous development in this area of investigation of social space and becomes research in its own right on this subject. It has managed to make explicit that space is defined by people in a most contradictory way, through the exclusion of people from architectural space. What remains is an

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[120] The latter references the Vitra exhibition on the Bauhaus in Weil am Rhein in 2015 where the curator Wilfried Kuehn and the artist photographer Andreas Sauer recreated spaces from the Bauhaus from fragmented photographs.

architecture that is defined by light and design, hinting at a human presence that belongs there but has stepped out of the frame. Höfer responds to questions of identity and presence and comes one step closer to responding to these complex values that make an architectural space social and capable of being occupied. Moreover, through her work she conveys a way to see space and to read architecture through the absence of what defines it. Reading her photography offers a lesson in "seeing" social space defined by an architecture that conveys space with, but also beyond, its material construct.

This chapter has explored social space: its nature, definition, and forms, and arrives at the conclusion that whether it is occupied or not, social space remains social. As in Derrida's letter, the physical absence of one thing or self may strengthen its conceptual presence; also, the lack of people in the public spaces explored in Whyte's research does not make them less public. Instead, seeing, observing, and identifying these contradictions might offer a greater appreciation of these spatial constructs. Whyte presented this through his research, Eisenman supported it through his architectural fiction and Kuehn Malvezzi through their architectural narrative. "Seeing absence" translates here to identifying, through architecture, the anthropology of space and employing it to further question the role of architecture.

The (Un)Realism

Introduction

Architecture has been well aware of the role of its image as a mode of analysis and communication,[1] but as technology and techniques of visual construction[2] developed towards a seamless representation of "reality", the pictorial representation of architecture began to transform from an aspect of architecture to a distinct phenomenon, meriting its own separate consideration. Perception and critique thus become invaluable assets in distinguishing reality from fiction and as an approach to a visual architectural "divertissement" with hidden truths that exposes architecture not only as a creative practice but also as a financial endeavour. In this context, photography faces, besides its own ambivalent nature between a depiction of reality and a construct of fiction, an identity crisis: what constitutes a photographic image – an image captured through the camera lens or an image created digitally which is, even then, constituted by photographic elements?[3] The photograph, with its links to an impossible representation of reality, yet nonetheless a representation, will be presented here as the protagonist in architecture's intentions and possibilities through an exploration of two opposite cases of architectural representation that use reality and fiction interchangeably. The first is the photographic announcement of the Elbphilharmonie project in Hamburg by the architects Herzog and de Meuron that propelled the materialisation of a proposal through its visual prominence, and the second is Andreas Gursky's photograph *Paris, Montparnasse* in which photography succeeds in presenting an architecture that is otherwise not entirely visible. These two case studies present the different roles of photography in "creating" architecture, literally or figuratively, and its intrinsic role as a medium by which to read the architecture envisaged versus the architecture witnessed. But the juxtaposition of these various aspects of photography and their influence on architecture also presents

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[1] These have been explored in previous chapters through Henri Lefebvre's perspective drawings of the Bibliothèque Sainte-Geneviève, the emergence of typology in architecture, and the study of the vernacular and "ordinary", with particular emphasis on the *Learning from Las Vegas* studies.

[2] By visual construction this means anything from photographic reproductions (where the image is considered to be a construct rather than an actual depiction of reality) to computer-generated or edited images.

[3] The definition of the "photograph" dates back to the Photo-Secessionists who distinguished the photograph as a result of a device (i.e., camera obscura) defined by high detail and mathematical and visual reliability. In contrast to the painted image, it used "mathematics and chemistry" instead of "pigments and manual dexterity". Bob Rogers, "Photography and the Photographic Image," *Art Journal* 38, no. 1 (Autumn 1978): 29–35. The development of digital programmes and devices makes this definition inaccurate today. Due to this outdated and yet unclear definition, henceforth "photographic image" will be used here to describe images that are not the result of a camera but still retain photographic attributes.

a developing architectural approach, one of "visual persuasion,"[4] that was eventually to have various outcomes in terms of what constitutes architecture, a practice that has become more and more reliant on its visual presence.

Figure 111. Joseph Nicéphore Niépce, View from the Window at Le Gras, c. 1826–27, heliograph on pewter, 16.68 x 20.32 cm (Harry Ransom Center, Austin)

Since the first documented photograph, "View from the Window at Le Gras", the photograph has not only been linked to the built environment but has also often been used as evidence of existence or of witnessing something that would otherwise be lost in time. It incorporates in its definition a means for "testing, confirming and constructing a total view of reality".[5] Through its capacity for visual construction, throughout history the photograph has engendered controversies, deceptions and other forms of visual miscommunication,[6] but has also provided a window onto

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[4] J Donald Ragsdale. *Compelling Form: Architecture as Visual Persuasion*. Newcastle: Cambridge Scholars Publishing, 2011.

[5] John Berger. *Understanding a Photograph*. (London: Penguin Classics, 2013), 21.

[6] Berger presents several such examples in *Ways of Seeing* (1972) and his other works mentioned here.

limitless possibilities. As the product of a light-capturing machine, the photograph has been received unequivocally as a testament of truth,[7] and it is this fundamental element of the photographic image that is reviewed in the case studies that follow. However, visual editing practices that refine, compose, or reconstruct a photograph succeed in altering this "reality", which often manages to evade detection. In recent decades the development of editing techniques and mediums now enable a level of re-creation that may even surpass the original, with images resulting from 3D rendering and photo-editing computer applications (e.g., Vray, Adobe Photoshop) that displace the discussion of the image and its message to a debate on representation and realism.[8] This development makes the analysis of a photograph or photographic image more complex and nuanced: it is often in danger of straying towards analyses of technical aspects rather than the effect the final product has on the viewer. Therefore, the photograph is approached here as a complex artefact, composed of content, structure and meaning (elements that can be edited to varying degrees), by focusing on the immediate effect it has on the viewer and their established understanding.

The recognition of photography as an independent art form has shifted the perspective on editing techniques and the issue of the veracity of the photograph and given them a space of expressive freedom. The photograph's identity as "evidence of truth"[9] can be used under these circumstances as a creative medium that intentionally aims to blur the borders of reality, or even to reconstruct it. In many cases this allows the creation of worlds that would otherwise be impossible to experience, and, in the specific cases examined here, to propel the realisation of a vision or a means to witness the invisible. This creative approach is somewhat reminiscent of the drawing and collage techniques that have been used in architecture for centuries,[10] yet the photographic element imbues these visualisations with the unique aspect of realistic evidence. The apparent possibilities of visual

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[7] John Berger equates the photograph's "truth" to the evidence of "being". In the example of the photograph of Ernesto Che Guevara's body after his death, Berger describes the role of the photograph as a testament to both the event of his death as well as to the legend that preceded his end. In Berger, "Image of Imperialism", *Understanding a Photograph*, 2-16.

[8] Robin Kelsey and Blake Stimson, *The Meaning of Photography* (Williamstown, Mass.: Sterling and Francine Clark Art Institute, 2008), 163, 180.

[9] Jennifer L Mnookin, "The Image of Truth: Photographic Evidence and the Power of Analogy," *Yale Journal of Law & the Humanities* 10, no. 1 (2013): 1–1.

[10] Étienne-Louis Boullée's drawings for the conceptual project *Cenotaph to Newton* are described as "realistic" and "an architectural experience in itself" in Daniel Willis and Ben Watts, *The Emerald City and Other Essays on the Architectural Imagination* (New York: Princeton Architectural Press, 1999), 231, and Thomas Wells Schaller, *The Art of Architectural Drawing: Imagination and Technique* (New York: Van Nostrand Reinhold, 1997), 167. The approximation to a certain level of reality is also seen in Karl Friedrich Schinkel's use of line, weight and perspective, giving his drawings a pictorial quality: he balances fiction and reality through the perspective experience of his renderings. Mark Pimlott, "Picturing Fictions," in *Without and Within: Essays on Territory and the Interior* (Rotterdam: episode publishers, 2007), 15–58. Additionally, Ludwig Mies van der Rohe is known for his images that combine collage and drawing in order to "reveal not only spatial and material qualities of his architectural proposals, but to illustrate a dialogue between architecture and its natural or built context". Jennifer A.E. Shields, *Collage and Architecture* (New York: Routledge, 2014), 75.

manipulation to alter the elements of the photograph are seen here as a means of inquiry and a creative process, among the creator's other objectives. This alteration of what is meant to represent the real is in itself a manipulation of reality, recreating the visual space witnessed and hence transforming fiction into the reality we experience. At the same time, considering the multiple levels of intervention that may take place in the creation of such an image, the role of "creator" is critically questioned. In the case of an artist, as will be seen later, the creation of the image is more often seen to have been entirely supervised by them alone. However, in an architectural practice, several people might be involved in the creation of such images and this collaboration may greatly affect both the outcome and the process in creating these "realities".

Figure 112. Superstudio, Continuous Monument, *view of Positano, 1969, collage, print and graphite on tracing paper, 45.5 x 54 cm (credit: Musée National d'Art Moderne, Centre Georges Pompidou, Paris)*

Figure 113. Mies van der Rohe, Resor House, 1937-1941, Graphite, wood veneer, cut-and-pasted gelatin silver photographs, and cut-and-pasted photo-reproduction (of Paul Klee's Colourful Meal, *1939) on illustration board, 76.1 x 101.5 cm*

Pierre-François-Henri Labrouste's Bibliothèque Sainte-Geneviève in Paris is an example of this multiple authorship and collaboration. As described in an earlier chapter,[11] the publication of the "edited photograph" of the Bibliothèque suggests that the reception of physical spaces through their "realistic" representation has been an essential part of architecture since these early architectural renderings and the influence of the growing role of photography. Therefore, since the 1800s and through the photographic element, architectural drawings and representations became increasingly adaptable in the production of conceptual images in the 1960s and '70s. With the emergence of radical architecture at this time, architects utilised collage to edit images and began to use photography as a key aspect of the architectural conceptual process and its communication.[12] The radical architectural collective Superstudio's famous collages of drawings and photographs visually

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[11] Chapter II i), "From Photography and Architecture to Photography in Architecture", analyses Levine's work and his findings in the context of this research. Neil Levine, "The Template of Photography in Nineteenth-Century Architectural Representation," *Journal of the Society of Architectural Historians* 71, no. 3 (2012): 306–31, https://jsah.ucpress.edu/content/ucpjsah/71/3/306.full.pdf

[12] Renata Hejduk, "A Generation on the Move: The Emancipatory Function of Architecture in the Radical Avante-Garde 1960-1972," in *Transportable Environments* 3 (New York: Taylor & Francis, 2006), 40–52.

convey their architectural concepts, transcending the real world within their own interpretation of an "anti-architectural" world dominated by the grid. As seen in Mies van der Rohe's collages, ever since its emergence as an artistic form in 1910, architects have considered the collage technique not merely for its role in image creation, but also for its ability to recreate "reality". Martino Stierli points out the link in Mies' work that balanced collage as an artistic technique and montage with its role as a political dialectic of the real and the fictitious.[13] The distinction between collage and montage is further explored by Walter Benjamin in his "Arcades" project, in which he presents collage as the mechanical technique of cutting and pasting and montage as the conceptual assemblage of these pieces to create something.[14] In a similar way to that in which a montage can be as much literary as visual, as Benjamin explains in his project, the technique of collage can also be expanded upon, taking other forms of editing besides copying and pasting, leading to the way visual montage is understood today, varying from simple to more complex edits that can improve an image or completely transform it to a new image altogether.

From the use of photographed elements to the editing of photographs and the construction of photo-realistic visualisations, the last few decades have witnessed an expansion of photography in architectural practice that is significantly affected by developments in the photographic discipline itself. In parallel with these technological advancements, the photographer follows similar practices, of editing and "perfecting" the photograph. As an artist, the photographer takes this one step further and uses the editing processes to recreate visual spaces, constructing visual architectural forms. Initially, through manual practices of collage, or painting over negatives or developed photographs, the photographic manipulation of images aimed at a recreation of the photographed subject. This has ranged from minor alterations to fantastical creations. Dora Maar's work is a faithful example of this scale: in her professional photography for major Parisian fashion magazines, she aimed at a flawless recreation of her subjects to resemble authentic, perfect shots. At the same time, in her work as part of the Surrealist movement her techniques of perfecting verisimilitude were applied to visualise fantastical scenes with equally realistic impact.[15] Now, with programmes that digitally edit photographs, the practice has become more accessible, streamlined, and effective.

Technological developments have precipitated the use of photography in architecture and by architects and have made photography an essential part of its processes. Nowadays, architects don the mantle of a photographer, or photographers become quintessential members of an architectural team perfecting the built design or visualising the concept. The attention to producing photographic realism bridges photography and architecture when recreating images of architectural spaces. But there is a

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[13] Martino Stierli. "Mies Montage," *AA Files*, 61 (2010): 54–72.

[14] Susan Buck-Moss, *The Dialectics of Seeing. Walter Benjamin and the Arcades Project* (Cambridge, MA; London: MIT Press, 1991), 67, 74.

[15] Brigitte Benkemoun, Jody Gladding, and Getty Publications. *Finding Dora Maar: an Artist, an Address Book, a Life* (New Haven, CT: Yale University Press, 2020), 36.

greater goal besides achieving the technical component of producing photo-realistic spaces. While the artistic component of photography on one hand aims to present different views and experiences that are otherwise impossible, on the other architecture's capacity to reshape the world can become an instrument for affirming the evidential aspect of the photograph. This photographic representation then becomes a vehicle for transforming the "realism" of the architectural concept into reality, a cycle of reaffirmation in which the photographed conceptual building leads to the construction of this building so that it can affirm the photograph's "evidence of truth". Herein, perhaps, lies the photographic image's greatest power, "visual persuasion", the basis of publicity (advertising) which Berger expands on by describing the profession's nuanced use of images and words to persuade through a depiction of a promised future.[16] The following case studies will demonstrate that the photograph's capacity to bridge reality and fiction offers the potential to push the boundaries of architecture as a practice and as an understanding of space, challenging what is feasible to accomplish, as well as the underlying motive of success that drives these actions.

Realising fiction

The image of architecture has always existed on the boundary between fiction and reality, of concept and outcome, yet the case of the Elbphilharmonie project represents an unprecedented occasion where the image of architecture crosses this boundary, exacting great force to realise its architecture, overcoming all obstacles in order to reaffirm its image. The aspect of the Elbphilharmonie project explored here will be that of its image first and foremost, a memorable depiction that began in 2006, imprinting itself on the minds of young students and older architects around the world through its publication in popular magazines, websites and newspapers.[17] The image, a perspective view of the proposed design by architects Jacques Herzog and Pierre de Meuron, seen floating above the river Norderelbe in Hamburg, was the result of photography and computer-generated rendering, giving the project a highly realistic presence. Since its publication, the image of the Elbphilharmonie has been irreversibly linked to that photographic image, which, to the surprise of many, was a photographic rendition of a non-existent building that took more than ten years to construct (it was completed at the end of 2016). A visual illusion turned reality, the Elbphilharmonie has a story fraught with scandal, struggle and seduction, but the end result is undoubtedly one of Europe's most prized architectural

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[16] John Berger, *Ways of Seeing* (London: Penguin Classics, 1972), 132.

[17] An archived cover image of the rendering may still be found in Heinrich Schnetzer, "Elbphilharmonie Hamburg – Grundsätzliche Überlegungen Zur Zusammenarbeit Ingenieur – Architekt," *Baumtechnik* 83, no. 3 (2006): 157–234. The rendering appeared in German magazines such as *Dossier* and *Agenda* (pages of which were used in the Venice Biennale installation), newspapers such as *Der Spiegel* (27 March 2007), architectural magazines such as *Domus* and *Architectural Digest* (earliest publications being in issues of 2007 and 2009), and online websites with an international audience such as *Dezeen* and *Archdaily* featuring multiple articles through the years.

achievements of the twenty-first century, and on the subject of "visual persuasion" is a monumental example of a case in which the building, despite its lengthy and arduous timeline to completion, was in a sense already completed through its promotion, that propelled the project and finally made the building a reality.

Figure 114. Herzog & de Meuron, Elbphilharmonie, Hamburg, rendering by Bloomimages, 2006.

In 2006 Herzog & de Meuron commissioned André Feldewert and Christian Zöllner, architects[18] who had become visualisation artists,[19] and later founders of the visualisation firm

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[18] Both André Feldewert and Christian Zöllner have worked previously at the Herzog & de Meuron practice. Myrta Köhler, "Die Bildermacher: Junge Architekten Entdecken Die Visualisierung Als Geschäftsfeld," *DAB Deutsches Architektenblatt,* January 6, 2013, https://www.dabonline.de/2013/06/01/die-bildermacher/.

[19] As mentioned by Feldewert and Zöllner in Köhler's article, an architectural background offers an advantage in producing architectural renderings as it requires a knowledge of reading drawings and understanding basic architectural concepts. However, recently their office has also started employing graphic designers, photographers, and artists, as advertised on their website.

Bloomimages, to create a rendered image of their proposal.[20] The rendering presents the proposal from what might be its best viewing angle, its composition effortless, yet upon closer inspection they are orchestrated to produce a sense of sublimity[21] to the viewer. The image uses several photographic elements to construct the existing site, upon which the computer-generated image of the Elbphilharmonie, with its brick base and ethereal glass upper section holds centre stage. The view is taken from a low angle, giving the impression that the photographer is standing at the edge of the north bank of the Elbe looking up towards the building. A cloudy sky minimises shadows yet gives the impression that the glass portion of the building is emerging from within the clouds as it reflects them, taking on their grey-blue hue. The effect is that of a ship with light-coloured sails emerging from a mist, or perhaps an iceberg floating down the river. The blurred boat in the lower part of the image gives a sense of temporality and an element of imperfection to the otherwise dreamlike presence of the building, a small deliberate addition that grounds the experience to reality as if pronouncing that what is shown is actually real, and is there.

Figure 115. Herzog & de Meuron, Elbphilharmonie*, digital collage by Herzog & de Meuron, 2003.*
© Herzog & de Meuron. All rights reserved.

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[20] Bloomimages was founded in 2008 in Hamburg. The publicity that the Elbphilharmonie render garnered them seems to have had a considerable role in the official founding of the firm and its future success: it now houses offices in both Hamburg and Berlin and includes clients such as OMA and Zaha Hadid.
[21] The sublime, although frequently referred to in parallel with beauty without being mutually exclusive, denotes emotions more akin to terror and awe. It is a quality which in political and commercial competition may describe the "strength" of the image. Boris Groys, *Art Power* (Cambridge, MA: The MIT Press, 2013), 124-129.

Figure 116. Candida Höfer, Elbphilharmonie Hamburg Jacques Herzog und Pierre de Meuron Kabinett Basel *V 2016. (The acrylic model can be seen on the top shelf of the second column of shelves). © Candida Höfer. All rights reserved.*

Looking closer, one might begin to discern irregularities in the image, such as the blurriness of the boat that does not look entirely natural, of the material differences between the existing pier and the CGI-rendered building, or the little figures on the building being actually too bright and colourful considering their environment and distance from the photographer. These slight hints of photographic manipulation are easy to locate in a higher definition image and after years of looking at such visual constructs, but in 2006 this image could, and did, pass as highly realistic. In 2003 Herzog & de Meuron had produced another constructed image, a collage that depicted an image of their physical model "photoshopped" on site. This image presented the proposal with the north bank of the Elbe in the background, a reconstructed warehouse as the lower part of the building and the signature extension on top. The "gem"-like upper addition was a model made of acrylic glass layers, set one on top of the other to create the mass of the building, with the top layers milled or sanded in the distinctive form of mountain peaks.[22] This visual angle appears to be more descriptive of the project

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[22] The model of the building used for the collage is still housed in the Elbphilharmonie, shown in the photograph by Candida Höfer, above.

than the 2006 rendering which focused on the visual effect it would have on the viewer. The difference in quality is even more striking in the 2006 rendering, which shows particular attention to creating a coherent visual experience.

Today, following the success of this visual impact, the details that betray the photographic manipulation are of little importance: on the contrary, it is a testament of how far photographic manipulation has progressed on the heels of the successful turning of a photograph into reality. Considering digital photographic editing programs became commercially available in the 1990s[23] the rendering created by Bloomimages can be considered one of the better photo-realistic images of those years. Employing CGI, they succeeded in making the invisible visible, and through marketing and publicity approaches they made the visible enticing. This is described as "manipulation" by Feldewert, who also adds: "we create a stage for the architecture. We seek the best angles and focal lengths, like a photographer."[24] This, of course, has a direct impact on the definition of the "real" and its association with photography, which Zöllner describes as a distortion of reality. The commissioning of Bloomimages for the 2006 rendering of the Elbphilharmonie image expresses the different intentions for this image; the 2003 image was used for internal purposes, in contrast to the wide dissemination of the second. This rendering of the west side of the Elbphilharmonie became one of the most recognisable images from 2006 onwards, as it was featured in various architectural media and ended up "outshining the actual project".[25] It managed to be convincing and assist the pursuit of the project, despite multiple obstacles: the project was immediately selected for construction, without the usual requirement for a competition;[26] the Architects Association of Hamburg, in fact, advocated for this project to be realised as it was announced. And after the public had been presented with this compelling proposal, they were also enthusiastic for its completion.

The leading, and often manipulative, role of the rendering process began with the first conception of the project. The project was initially conceptualised by German property developer Alexander Gérard, who had studied with Jacques Herzog and Pierre de Meuron.[27] He intended to create a building to accommodate luxury flats and a luxury hotel at the site of Kaispeicher A. In 2003 it was presented as an alternative proposition that would preserve the historical value of the site,

[23] Peter L M Rockwell, and Peter W Knaack. *Out of the Darkroom*: *A Short History of the Photofinishing Industry*. (London: 2 P Press, 2006), 80.

[24] Christian Tröster, "Rendering," Lufthansa exclusive, August 2013. (Translated by author)

[25] Nadia Alaily-Mattar. *About Star Architecture: Reflecting on Cities in Europe* (Dordrecht: Springer Nature, 2020), 118.

[26] Rowan Moore. "Elbphilharmonie: Hamburg's Dazzling, Costly Castle in the Air." *Guardian*, November 6, 2016. https://www.theguardian.com/artanddesign/2016/nov/06/elbphilharmonie-hamburg-herzog-de-meuron-costly-castle-in-the-air.

[27] Oliver Wainwright. "'We Thought It Was Going to Destroy Us' … Herzog and De Meuron's Hamburg Miracle." *Guardian*, November 4, 2016. https://www.theguardian.com/artanddesign/2016/nov/04/hamburg-elbphilhamonie-herzog-de-meuron-a-cathedral-for-our-time.

unlike the 2001 proposal by architects Gruber and Popp[28] for a 90-metre-tall media office tower, MediaCityPort[29] , which was no longer viable after the dotcom bubble burst at the end of the 1990s, resulting in a dwindling demand for media offices.

The Swiss architects Jacques Herzog and Pierre de Meuron founded their office in 1978 in Basel soon after receiving international critical attention for their projects such as the Blue House in Oberwil, Switzerland (1980) and the Ricola Storage Building in Laufen, Switzerland (1987), and in 2001 they were awarded the Pritzker Architecture Prize. The Elbphilharmonie is one of many projects that were distinguished by Herzog and de Meuron's innovative, unique approach to design, and became an iconic representation of the architects' work; however, the process of creating this particular building is recalled with an element of horror by the architects. In an interview for the *Guardian*, Jacques Herzog mentions: "There were moments when we thought this building would destroy our whole career, […] Somehow, we were responsible for this total disaster, because we had seduced people with our design".[30] This statement sums up the Elbphilharmonie phenomenon, that involved the visual seduction of the photograph and all that came with it. When Gérard contacted the architects with his project the architects responded with a series of proposals with separate buildings for the concert hall and the hotel, before finally proposing a cultural and residential multi-complex that would house the Elbphilharmonie concert hall along with luxury flats and a hotel on top of the existing warehouse. The design recognised the central importance the building would have in the immediate vicinity of the development of Hamburg's port, the historical legacy of the existing buildings and the international attention that such a project would bring to the city. The proposal was intended to create a cultural jewel for the city that was a paragon of architectural, technological and engineering ingenuity.

Indeed, Herzog and de Meuron's design that was presented to Gérard in 2003 signalled the beginning of such an endeavour, the completion of a "rough" collage that was only established fully with the later rendering in 2006; thus, construction only began in 2007. However, the promised proposal projected in the rendering was soon found to be impossible to be completed with the available budget of €77m. The design and detail that lent the project its visual realism and sublimity required using technologies and materials whose cost far exceeded the estimated expense. Construction progressed intermittently, as it was stalled by financial and legal issues. Following the topping-out ceremony in 2010 the project was suspended, after facing not only a lack of funds but also a series of embezzlement cases. Toilet brushes costing €300 and paper towel dispensers €957[31]

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[28] Marc-Oliver Rehrmann, and NDR.de. "Der Unbekannte Vorgänger Der Elbphilharmonie." *Norddeutscher Rundfunk*, 2017. https://www.ndr.de/kultur/elbphilharmonie/Der-unbekannte-Vorgaenger-der-Elbphilharmonie,elbphilharmonie1534.html.

[29] Archello. "Elbphilharmonie Hamburg." Accessed June 9, 2019. https://archello.com/project/elbphilharmonie-hamburg.

[30] Wainwright.

[31] The Local. "€700m over Budget, Hamburg Concert Hall Finally Finished." *The Local.De*, November 1, 2016.

made the Elbphilharmonie front-page news. Financial and legal issues between the city, the architects and the construction company, Hochtief, almost led to the abandonment of the project.

Figure 117. Herzog & de Meuron, Elbphilharmonie - The construction site as a common ground of diverging interests, 2012, photograph by Herzog & de Meuron, Venice Biennale.

It was during this period that Herzog & de Meuron were invited to participate in the 13th Architecture Exhibition of the Venice Biennale (2012)[32] and chose to present the Elbphilharmonie project, even though it was still uncertain whether it was going to be completed. The exhibition presented a few physical models showcasing the design and research that the project had undertaken, but the main exhibit was two panels that covered the length of the room, a composition of numerous excerpts from press reports on the building from its early beginnings to its more recent situation. Their selection was to demonstrate "that this project has been a focus of public interest and ongoing debate

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[32] *Biennale Architettura 2012: Common Ground: 29.08-25.11 Venice*. (Venezia: Marsilio, 2012). It was at this biennale that Valerio Olgiati exhibited his work "Pictographs - Statements of Contemporary Architects", another event that focused around the importance and influence of the image within architecture. The project was turned into the publication *The Images of Architects* (2014) which is mentioned in the chapter "A brief overview of architecture and its 'seeing'".

for years".[33] This exhibition, though, instilled the image of the building in the consciousness of the Biennale visitors, drawing out its story and persuading the public that it needed to be realised. Herzog & de Meuron described the Elbphilharmonie as a "democratic project, informed with euphoric energy, driven by architectural beauty, cultural-political vision, and civic pride", aspects that were emphasised through its visual representation. As seen from the press cuttings, the image of the Elbphilharmonie recurred interminably as a promise which was thwarted by financial and legal issues. Its advertising and "visual persuasion", though, soon overcame these issues through the sheer force of its image.

Soon after the exhibition, renegotiations between the city, the architects, and the construction company led to the announcement of a new completion date in 2016. The budget had now multiplied tenfold and reached more than €789m, an amount that makes the Elbphilharmonie one of the most expensive buildings in the world.[34] Surprisingly, however, the notoriety of these financial scandals did not diminish the image of the project in the least.[35] The idealism and beauty portrayed in the photographic image held the public in its thrall, and it has remained a celebrated accomplishment and an essential part of the city's contemporary image. Eventually, the Elbphilharmonie opened its doors to the public on 11 January 2017, yet despite the various hurdles and delays it appeared to be a prophecy fulfilled. Through the photographic images that were published in several architectural magazines over the years, even before the beginning of construction, the project was already fleshed out in the minds of readers and to those who have yet to visit the building. Its construction was an eventual opportunity to experience in person that which had for so long been experienced virtually through CGI and collage images.

The "visual persuasion" of the rendering did not only affect the public; it also had also a more focused effect on architectural design and technology. "The glass façade consisting in part of curved panels, some of them carved open, transforms the new building, perched on top of the old one, into a gigantic, iridescent crystal, whose appearance keeps changing as it catches the reflections of the sky, the water and the city." (Herzog & de Meuron, 2016). The optical illusion of the light, ethereal form floating above the city and the mirage effect presented in the rendering were truthfully realised in the constructed building and documented through photographs of the actual building this time. The vision has finally become reality, experienced by passers-by as they walk down the pedestrian path along the river and through the Magellan Terrassen. Its design, an idealism that was part of the rendering's

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[33] From the press release Herzog & de Meuron, "Elbphilharmonie - The construction site as a common ground of diverging interests". August 2012, https://www.herzogdemeuron.com/index/projects/exhibitions/venice-biennale-2012.html.

[34] Zoya Gul Hasan. "The World's Most Expensive Buildings." *Archdaily*, 2017. https://www.archdaily.com/881766/the-worlds-most-expensive-buildings.

[35] A silver lining to this was the creation of a new transparency law that would save future public projects from facing similar financial issues. Joe Mathews. "How a German Scandal Resulted in a Model Transparency Law." *SFGATE*, October 16, 2017. https://www.sfgate.com/opinion/article/How-a-scandal-in-Hamburg-produced-a-transparency-12276847.php.

"visual persuasion", heralded a new beginning for architectural design, going beyond high modernism, post-modernism and constructivism.[36] Through creating contradictions, the glass façade representing lightness in contrast to the Kaispeicher's heaviness, it fluctuates between transparency, opacity and reflection, rigidity and acquiescence.

The 21,800 m^2 of glass façade is not a conventional glass curtain wall, but instead has curves and printed elements, specifically engineered to achieve the visual effect of the rendering. These bespoke designs[37] offer a striking experience to the visitors and a unique outlook for the building, but to achieve this visual experience the use of complex technologies and expensive materials and challenging installations was required. The units were prefabricated double-skin safety glass, double-glazed and screen-printed with a "water droplet" effect to reduce solar flare and create a "vignette" feel that retained visibility for the visitors. This additional "ipachrome design"[38] treatment is applied throughout the façade's surface in a somewhat random pattern to create an undulating appearance that, due to the material's reflective properties, shimmers in certain light. In select locations perforations required the glass to curve to disguise the loggias, the light wells and the large wind deflectors. These units were probably some of the most complex to engineer, blending the exterior with the interior seamlessly and at the same time producing spectacular reflections of the city, the water and the sky. These spherical curvatures required specially designed aluminium elements to be installed and supported, and these ranged from the small loggia façades of the private residences to the large auditorium balconies. These curved elements, dispersed on the surface of the façade, create "ripples", enhancing the overall visual effect generated by the glass section of the building and adding to the constantly changing scenery that it generates.

The façade was officially completed in May 2014, establishing the key element that defines the Elbphilharmonie on the horizon of Hamburg city. Herzog & de Meuron chose to replace the rigidity of glass with a more pliable form to give the building its unique and eye-catching fluidity. While the architects had experimented with a similar design approach with convex and concave forms in previous projects, such as the 2014 Aoyama Prada building, with its diamond-shaped curved glass panels,[39] the Elbphilharmonie design shows a rather more challenging and complicated endeavour developed in a very short time, compared to the much simpler Prada design. Considering the pressure of time constraints and budget issues, this complication in the design could have been replaced with a

[36] Hanno Rauterberg and Lara Mehling, "Waves of Optimism: First Impressions of The Elbphilharmonie," *Log* 39 (2017): 20–30.

[37] Josef Gartner. "Elbphilharmonie Project Detail." *Josef Gartner GmbH*. Accessed April 20, 2020. https://josef-gartner.permasteelisagroup.com/project-detail?project=1841.

[38] Intelligent Glass Solutions. "Installing the Glass Facade of Hamburg's Iconic Concert Hall." *IGS magazine.* Accessed April 20, 2020. https://igsmag.com/videos/installing-the-glass-facade-of-hamburgs-iconic-concert-hall/.

[39] Lisa Huang, *Learning from Failure in the Design Process: Experimenting with Materials* (New York: Routledge, 2020), 56.

simpler curtain wall. This change would have been detrimental for everyone involved, architects and city alike, as an early rendering presenting the façade as a smooth glass surface is not only drastically different from the 2006 image, but also it lacks all those elements of reflection, blending and simulation that the image introduced, and through which its viewers were seduced. The precise recreation of the visual effect portrayed in the image in real life was therefore of key importance to the success of the project.

Photographic seduction

The attention that the photographic image attracted for this project has been endless. In fact, the effect that the 2006 rendering had in promoting the completion of the building seems to reverberate in other areas as well. The architects' attention to the design of the main spaces, the materials and the light, besides the experience that they offer the visitors, portrays a specific photographic disposition. This is expressed both in the design of the building through the production of "photogenic" spaces, and through the photographs and rendered images used during construction and after the completion of the building. These images were produced by architectural visualisers such as Bloomimages and architectural photographers commissioned by the architects, some of whom are well-known artists such as Iwan Baan and Candida Höfer. Through these photographs it is possible to piece together a virtual visit to the building that draws the viewer in from the entrance to the innermost spaces. The journey begins through a small entrance that is initially quite inconspicuous. That is, until one enters the dark, narrow "bunker" that lies at the eastern side of the building where an escalator takes the visitor up a shimmering white tube. A combination of recessed lights, glass sequins and a seamlessly sculpted tunnel take the visitor through a transformative passage. In the photographs by Baan and Höfer the escalator becomes a central point of interest, and its final destination is a mystery. Travelling more than 80 metres, it is the first arched escalator of its kind, a design detail that gives a sense of "endless" ascension. It is, therefore, not due to photographic "tricks" that neither photograph shows what lies at the other end of the tunnel. In Höfer's case, in particular, the photograph almost achieves the effect of a "heavenly" staircase that combines ethereal lightness, mystery and the all-encompassing shimmers, a material theme that remains throughout the building in various ways.

At the end of the escalator the visitor reaches the plaza, an open public space from where the three auditoriums can be accessed. Here, Iwan Baan presents the viewer with a duality of heaviness and lightness through the contrast between the red brick and white surfaces. This is understood to be the in-between space that separates the Kaispeicher warehouse and the glass extension above. Curved ceilings and walls and columns at irregular angles mimic the surface of water while lighting fixtures interspersed here and there bring to mind light shafts breaking through the waves. This effect is reinforced by the wavy glass panels that enclose the space yet allow for expansive views of the surrounding city and harbour. The reflections of the visitors, the lights and other interior and exterior

elements are intensified by the curved glass surfaces and have the same effect from either side of the plaza, both interior and exterior.

The sense of sight is perhaps the sense through which this building can be experienced most strongly, and this is evident when the visitor tries to traverse the swirling staircases that evoke an Escher-esque déjà vu. The route leads up the stairs to the heart of the Elbphilharmonie and its three auditoriums. For the Grand Hall, a collaboration between Herzog & de Meuron and renowned acoustician Yasuhisa Toyota resulted in an intricately sculptured space that diffuses sound through thousands of curvilinear panels. The parametrically designed interiors and elements create a multifaceted rotunda cave,[40] the texture of which is repeated from the detail of the panels to the overall arrangement of the space. The photographs by both Baan and Höfer exude a feeling of unreality, the former through more mysterious lighting that is very similar to the architects' renders, and the latter through her characteristic illumination that gives the space a theatrical, static quality.

The epitome of the visual experience comes when the visitor reaches the top of the building at a smaller public indoor space. There, they experience a close-up view of the convex and concave glass panes peppered with ipachrome design that frames the views of the surrounding area in a vignette style of irregular shapes. The curved glass panes produce reflections from both the interior and the exterior that, together with the textures of the embedded design, provide a unique viewing experience to those looking through them. These 'curated' frames and the irregularity of the façade function as small surprises, distorting what should be straight, reflecting colours and images unexpectedly, both one at a time and as a whole as the visitor moves alongside it.

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[40] A geometry clearly visible from the model exhibited on site and during the 2012 Venice Biennale.

Figure 119. Iwan Baan, Elbphilharmonie, Hamburg, *2017. (The view through the ipachrome panels).*

Whether looking at the building from the outside or viewing the city from within, the visual effect of the Elbphilharmonie is a constant. The strength of the visual in this project is reflected by the commissioning of Baan and Höfer, whose photography captures the multifaceted aspects of the building. On one hand the photography of the Elbphilharmonie continues the tradition of disseminating the visual experience initiated by the 2006 photographic render. On the other hand, it supports the actuality hinted at in the original render by creating a juxtaposition between illusion and reality. In Höfer's photographs of the building there is an interplay between the actual exterior representation and the fictional recreation of the interiors. In *Elbphilharmonie Hamburg Herzog & de Meuron Hamburg I 2016* she presents the north elevation of the Elbphilharmonie in its entirety. This photograph is taken from slightly above the building's mid height with a very austere framing and no distortion. It could easily be considered as an architectural elevation, with its straight, crisp lines. What stands out in this photograph, however, is the glass façade, with its waves and ripples that distorts the scenery as it is reflected. The height from which the photograph is taken creates a continuity between the horizon behind the building and the horizon of the scene behind the photographer that is reflected on the glass façade. As the two blend, the clearly defined lines of the Elbphilharmonie transform into a window frame through which an alternative, fantasy world can be seen. Following a similar pattern, Höfer's other photographic representations of the building create an incorporeal experience of spaces that seem as if they belong in a dream. The lines of the building

create movement through her carefully controlled gaze while the use of light that bathes the spaces makes them otherworldly. In the exhibition "Elbphilharmonie Revisited" at Deichtorhallen,[41] Höfer presented 22 large-scale photographs, not only of the building itself but also of its models that are housed there. The serial depiction of the Elbphilharmonie through these different forms produces a fictional narrative in which the building becomes the main protagonist as it is transformed through its own story.

Figure 120. Candida Höfer, Elbphilharmonie Hamburg Herzog & de Meuron Hamburg I 2016, *2016, chromogenic print, 180.0 x 197.9 cm. (this photograph showcases the effect of the façade as it reflects the surrounding city).* © Candida Höfer. All rights reserved.

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[41] Dirk Luckow, Kolja Reichert, and Snoeck Verlagsgesellschaft MbH. *Elbphilharmonie Revisited*. (Köln: Köln Snoeck, 2017).

Iwan Baan's photographic approach departs from Höfer's ethereal mysticism and is more matter of fact. His photography of the building tends to be rather documentary, although often many of his photographs veer towards a similar aesthetic approach to Höfer's fictional narration, through the innate tendency of the spaces to generate such visuals. Whether it is the rippling façade's reflections or the diffused light in the interior maze-like staircases, the building imparts its own illusion to the photograph. One particular aspect of Baan's work, however, tends to stand out – his recreation of the 2006 photographic render. There are several photographs that show the Elbphilharmonie from the nearby riverbank, but one in particular manages to capture the building in an eerily similar way to that of the photographic render. The similarity is, in fact, so great that they could easily be thought to be two photographs taken on two different days under different lighting conditions. The Elbphilharmonie rises above the viewer as it sails towards them from one of the most identifiable angles. In this moment, Baan's photograph identifies the monumentality of the building as it was introduced in the original render and manages to blur the lines between the illusion presented in the render and the factuality of the photograph. It is a homage to the distinctive visual concept of the building imagined by the architects and envisaged by the visualisers, through which the world had the opportunity to be introduced to the building, and with which they subsequently associated the building.

Rendering photography

Throughout all its visual iterations the Elbphilharmonie has transformed into new possibilities that its physical self continues to attempt to realize. The Elbphilharmonie is an example where a simulation does not simulate what exists, but rather creates a new existence: it is a visual seduction and at the same time remains forever a simulacrum, linking the object irrevocably to its image. For the Elbphilharmonie is not only a building, but also an image, one that challenges reality and transforms itself into the object that it represents. Besides its creative, or rather expressive, capacity it is also ultimately a mechanism of publicity that advocates for the financial goals it represents through a political consensus driven by its visual persuasion. It is a layered visual construct, a result of established perceptions and concepts, of psychological manipulation through aesthetics, of technological expertise that attempts to recreate the world through its depiction. Where photography was intrinsically linked to the past, to the capturing and preserving of objects through time, this type of photographic image presents a medium of authorship that seeks to capture the future and transform the present to its image.

Walter Benjamin considered the role of photography to be a means of constructing reality, preferring it over the ordinary reality it was meant to present, and he saw the photographer as the producer of this new reality.[42] For Benjamin, the photograph was a medium of producing "new image-worlds",[43] achieved through montage and editing reality to express the author's message. His view of the photographic image here is limited in that it only functions as a window to these different worlds rather than having an active role in making those image-worlds concrete. In the case of the 2006 photographic rendering, if the architect is the author and the visualisers are the producers, then the author, in this case, applies a force of persuasiveness through their design that the producers enhance through visual seduction.

The photograph becomes here a complex construct of objects, signs and messages, subjects that are essential in Jean Baudrillard's critique of the image. These elements produce a visual performance which for Baudrillard is a means for the viewer to test what is being represented. In the Elbphilharmonie project this translates in two ways; one is that the image transforms into a performance and one is where the viewer actively reacts to this performance. A performance is a presentation that requires energy: it is an action that aims to accomplish a goal. The building of the Elbphilharmonie is an example of the image breaching the boundaries of what a photographic image

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[42] Walter Benjamin, "The Author as Producer," in *Selected Writings. Vol. 2 Pt. 2, 1931-1934*, trans. and ed. Michael William Jennings, Howard. Eiland, Gary Smith, and Rodney Livingstone (Cambridge, MA; London: The Belknap Press of Harvard University Press, 1999), 768–82 (775–776).
[43] Walter Benjamin. "News About Flowers," in *Selected Writings. Vol. 2 Pt. 1, 1927-1930*, trans. and ed. Michael William Jennings, Howard Eiland, Gary Smith, and Rodney Livingstone (Cambridge, MA.; London: The Belknap Press of Harvard University Press, 1999). 155–57.

may accomplish, and its performance affects both people and matter in order to achieve this realisation. Simultaneously, the viewer's testing of the performance plays an elemental role in this realisation. The desire instilled through the performance leads to intervention, and the viewer turns into the hand that acts on what the image conceptually intends. This positions the photographic image as a political instrument that directs activity and debate on a public scale, events that took place on several occasions throughout the Elbphilharmonie's construction. It presents evidence that the value of the image is beyond its representation and is instead found in what it "does". Susan Sontag equates the photograph with a form of "acquisition", an act of possessing objects, people, places, and situations, a form of practising control over the world.[44] Within Western capitalist society this also translates into a specific evaluation of the image as spectacle and control that is sovereign over our political authority, thus encouraging economic consumption.[45] In fact, this is unsurprising considering that photography appeared during a time of technological and economic change,[46] thus suggesting a link between photography and social change, economics and politics ever since.

In another common Baudrillardian term, the 2006 photographic image uses a form of "trompe l'oeil" that plays with the viewer's perception of time and reality. In a comparison of the differences between the analogue photograph and the digital image Baudrillard mentions that the photograph has the capacity to be an illusion of the "moment of disappearance, whereas in the synthetic image, whatever it is, the real has already disappeared. This slight displacement gives the object the magic, the discrete charm of a previous existence".[47] While this statement questions the 2006 photographic rendering of the Elbphilharmonie, since according to Baudrillard a constructed image lacks the notion of illusion and displacement, it is important to remember the effect of photorealism in digital montage that attempts to make the image realistic. Again, Baudrillard interjects, proposing that "the more we approach absolute definition, or the realistic perfection of the image, the more the image's power of illusion is lost".[48] However, in this case the "synthetic image", rather than offering a definition, recreates an atmosphere, insinuating truthfulness through its performance and endeavouring to present a photographic capture of reality. With this established, the following phrase expresses thoroughly the effect of the 2006 Elbphilharmonie rendering: "In the photographic process it's not a question of considering the world as an object, of acting as if it was already there as an object, but of making it

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[44] Susan Sontag, *On Photography* (London: Penguin Books, 1977), 121-22.

[45] Ibid., 140.

[46] Appearing "between the publication of Adam Smith's *The Wealth of Nations (1776)* and Karl Marx and Friedrich Engels's *The Communist Manifesto* (1848)". Kevin Coleman and Daniel James, "Capitalism and the Camera," in *Capitalism and the Camera: Essays on Photography and Extraction* (London: Verso, 2021), 1–23.

[47] Baudrillard, Jean, Nicholas Zurbrugg, and Queensland Institute of Modern Art. *Jean Baudrillard: Art and Artefact* (London; Thousand Oaks, CA.: SAGE Publications, 1997), 30.

[48] Baudrillard, 8.

become an object, in other words, of making it become other, of exhuming the alterity buried beneath its alleged reality […]".[49]

Baudrillard also showed an extensive interest in the meaning of objects and signs as part of a reproducible process. Indeed, the effect of the Elbphilharmonie was greatly reliant on the result of reproducibility, in this case in the form of mass reproduction, for without a large enough audience the image would not have the authority it required to achieve its goal. This translates into an immediate relationship between financial value and cultural value, which in today's capitalist society are mutually reliant, for culture defines the social methods and priorities by which financial value is attributed.[50] The cultural importance of the Elbphilharmonie's reproduction is reflected in the psychological reaction elicited originally and reinforced through the effects of nostalgia in the face of its "non-realisation" following the issues around its completion. This was an essential element of its persuasive character, for, as John Berger notes, "publicity is, in essence, nostalgic. It has to sell the past to the future".[51] And it is widely acknowledged that the Elbphilharmonie, without the publicity and the pressure that followed it, would not have existed today outside of the pages of magazines. Its visual reproduction, that enabled its global familiarity, helped to pull strings to produce not only its realisation but also the future success of the building and its associated stakeholders (the architects, the funders, the city, and the citizens). Since 2006 the Elbphilharmonie has been irrevocably associated with the impression made by the 2006 rendering; as observed from following photographs of the building that imitated the rendering, people who have not visited the Elbphilharmonie (and perhaps those who have) recognise the building and remember it in this distinctive appearance.

This, then, raises the question of the financial value of the 2006 rendering. A CGI rendering ranges today from anywhere between €50 and €5000; yet, considering the accomplished effect of the Elbphilharmonie rendering it could be said that its estimated value should be tied to the value of its realised representation, and thus close to the €789 million budget of the construction. By comparison, Candida Höfer's *Elbphilharmonie Hamburg Herzog & de Meuron Hamburg I 2016* was sold in 2018 for € 54,620.[52] The real monetary value of the Elbphilharmonie is actually insignificant in the face of its accomplishment, yet its political and cultural value was created through its open publicity and the wide reproduction of its photographic image. In contrast, the value of Höfer's photographs is, besides other factors, also dependent on the number of prints produced by the artist. Furthermore, these two

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[49] Baudrillard, 30.

[50] Shalom H. Schwartz, "Cultural and Individual Value Correlates of Capitalism: A Comparative Analysis," *Psychological Inquiry* 18, no. 1 (March 1, 2007): 52–57, https://doi.org/10.1080/10478400701388963.

[51] Berger, John. *Ways of Seeing*. (London: Penguin Classics, 1972), 139

[52] The purchase was made through the Dorotheum Gmbh auction house, from where the information was gathered. Most photographs by Höfer range between €10.000-€50.000 with the exception of *Bibliotheca Geral da Universidade de Coimbra* (2016) a chromogenic print at a scale of 179 x 223 cm (one of three prints besides the photographer's own print) selling in 2015 at a record €95.000. Sophie Bubmann, "Technical Perfection: Candida Höfer," *Barneby's Magazine*, April 27, 2021, https://www.barnebys.com/blog/technical-perfection-candida-hofer.

images could be placed opposite each other: one is a fictional construct and one the result of a camera, one is designed to have immediate effect on the physical space, whereas the other produced as a work of art, intended to be a contribution to culture , to "provoke contemplation [and] self-reflection".[53] In this evaluation of the "work of art" there is also the possibility to "resist the relentless pull of consumer capitalism", yet as witnessed here, Höfer's photograph has a certain Objecthood,[54] a "presentness" of the physical print through which it additionally becomes a commodity. Deriving a "formula" for assessing the financial value of an image, whether it is a rendering or a photograph, an advertisement, or a work of art, is not possible when they perform different roles in the areas of politics and culture. However, through this comparison between a publicity image and a work of art emerge issues of originality, the artist's involvement in the resulting outcome, and the intention of the image, issues that were central in John Berger's *Ways of Seeing* (1972). The case that follows further complicates this comparison by involving the attributes of the fictional reconstruction of an image, an unreal representation of an architectural project, and a high price tag within the context of art photography.

Paris, Montparnasse

Figure 122. Andreas Gursky, Paris, Montparnasse, 1993, chromogenic print, 149 x 354 cm.

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[53] Lucy Soutter, *Why Art Photography* (London: Routledge, 2018), https://doi.org/10.4324/9781315270630, 8.
[54] Michael Fried, "Art and Objecthood," in *Minimal Art*, ed. Gregory Battcock (New York: Dutton, 1968), 116–47.

While fiction engenders reality in the case of the Elbphilharmonie, reality needs illusion for it to be experienced in cases where the eye cannot capture truth in its entirety. This is true in the case of a housing complex in Paris that received international recognition almost thirty years after its completion, through its photographic representation. The Maine-Montparnasse housing complex, designed by the French architect Jean Dubuisson in 1966, was photographed and reconstructed by the German photographer Andreas Gursky in his famous 1993 photograph *Paris, Montparnasse*, a digital collage of multiple smaller photographs resulting in a photographic image, over 3m in length, which was sold in 2013 for £1,482,500.[55] It can be said that his representation of the Maine-Montparnasse building is today one of the most paradigmatic images of the complex and the only image that manages to capture the essence of the building's concept in such an impressive fashion.

The Maine-Montparnasse complex is situated in the 14th arrondissement of Paris and consists of two separate buildings. These lie on either side of the Jardin Atlantique, above the rails of the Montparnasse train station, and offer a variety of housing; Maine-Montparnasse I was designed to house 255 luxury apartments and overlooks the Boulevard Pasteur, while Maine-Montparnasse II, on rue Commandant René-Mouchotte, was designed for low-income residents, with 750 apartments. Maine-Montparnasse II combines different types of apartments, from studios to duplexes, resulting in a project that successfully responds to a combination of social living requirements.[56] With its exceptional scale and design it is often referred to as the Mouchotte village.[57]

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[55] The auctioned print is one of two artist's proofs apart from the edition of five, and began from a minimum bid for £1m at Sotheby's London. Other works by Gursky have received even higher bids, with his *Rhein II, 1999* selling for £2.7m in 2011 at Christie's in New York "setting a new world record for a photograph", according to the *Guardian*. Maev Kennedy, "Andreas Gursky's Rhine II Photograph Sells for $4.3m," *Guardian*, November 11, 2011, https://www.theguardian.com/artanddesign/2011/nov/11/andreas-gursky-rhine-ii-photograph.

[56] Élise Guillerm. "L'ensemble Des Soupirs à Commercy, Une Réalisation Emblématique et Méconnue de Jean Dubuisson En Lorraine." *Colonnes: Archives d'architecture Du XXe Siécle*, 26 (2010): 68–72.

[57] "Barre Dubuisson à Maine-Montparnasse: Enfants Mouchotte, y Êtes-Vous ?" *Le Courrier de l'architecte*, April 2011. http://www.lecourrierdelarchitecte.com/article_1762.
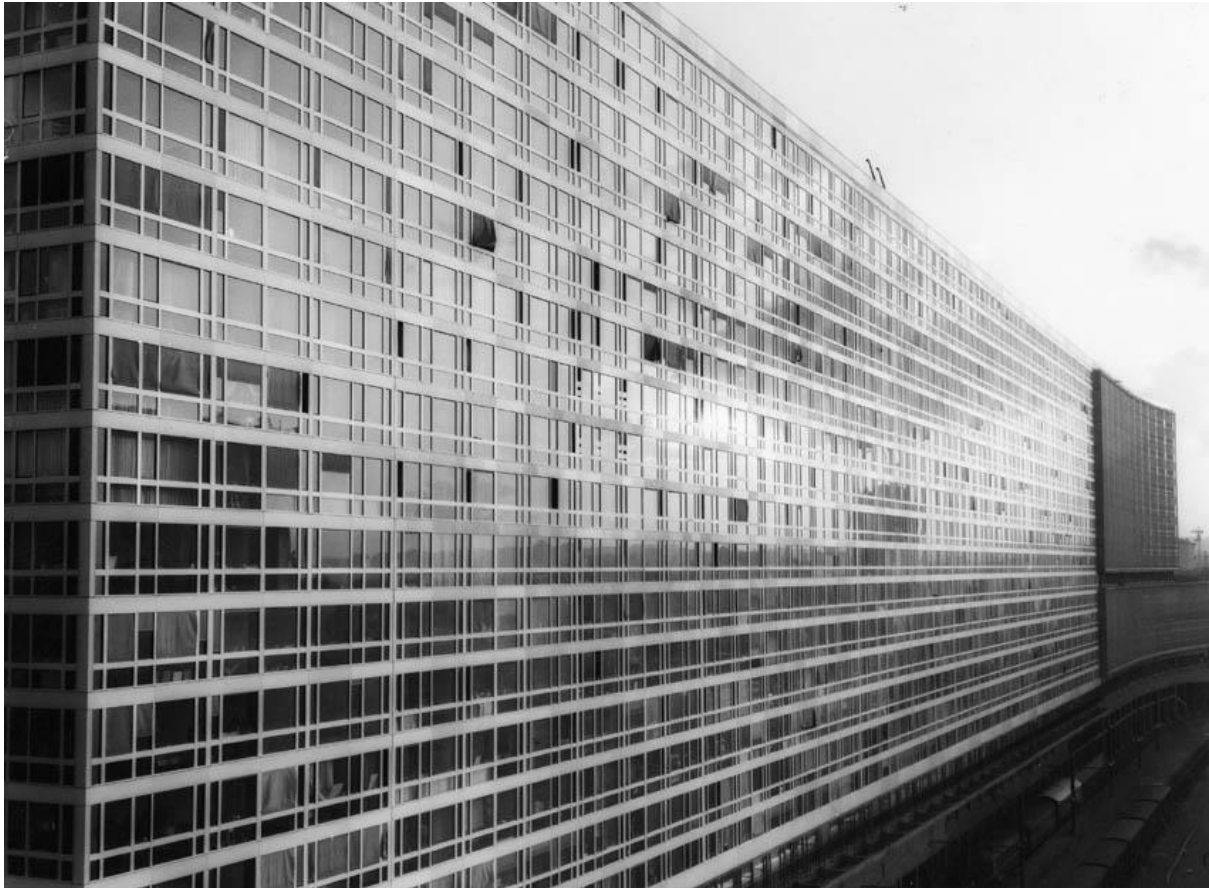
Figure 123. View from the railway. Sector II. Photograph probably by Jean Biaugeaud, 1964. © Fonds Dubuisson/Siaf/Cité de l'architecture et du Patrimoine, Archives d'architecture du XXème siècle.

In the 1960s the complex represented "one of the major transformations of the Parisian landscape in the 20th century and the first of the urban renewal operations carried out on the Left Bank",[58] with its modern curtain wall and monumental size – 40 metres high and 200 metres long. It was part of a wider urban development that followed after the building height restrictions in Paris were raised in 1956,[59] resulting in the realisation of several high-rise blocks, including the famous Tour Montparnasse, only a block away. Part of the grander Maine-Montparnasse operation, the Mouchotte building constitutes an example of urban planning and architectural design that was intended to respond to the demographic and economic growth of "Les Trente Glorieuses" (The Glorious Thirty), the thirty years (1946-1975) of growth and reconstruction that followed the end of the Second World War. In particular, the Mouchotte building attracted a specific demographic profile

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[58] « *l'une des transformations majeures du paysage parisien au XXe siècle et la première des opérations de rénovation urbaine conduites sur la rive gauche»* in Pierre Caillot and Gérard Monnier, "Le 'Village Mouchotte' à Paris: Acteurs et Militants de La Modernité Urbaine," in *Habiter La Modernité : Actes Du Colloque "Vivre Au 3e Millénaire Dans Un Immeuble Emblématique de La Modernité,* ed. Xavier Guillot (Saint-Etienne: Publ. de l'Univ., 2006), 55–65.(Translation by author)

[59] Russell Kelley, *The Making of Paris: The Story of How Paris Evolved from a Fishing Village into the World's Most Beautiful City* (Lyons: Lyons Press, 2021), 224.

– young professionals, civil servants and intellectuals – due to its proximity to the Latin Quarter and the government ministries. Not long after its completion the building became a "bastion of cultural, social and political activism", following the mobilisation of the inhabitants during the events of May '68.[60] In addition, the Mouchotte building harbours in its grounds the Saint-Bernard-de-Montparnasse chapel, a site of activism during the French sex workers' revolt in 1975. From the beginning, the Mouchotte building constituted the starting point of the transformation of the Left Bank in Paris and it continued to do so by having a central role in the transformation of the local community, even inspiring a short film by Bertrand Tavernier, *Des infants gâtés*, which features shots taken on location there. The role of the Mouchotte building in these events establishes it as more than an architectural structure – an emblem of cultural and socio-political transformation.[61]
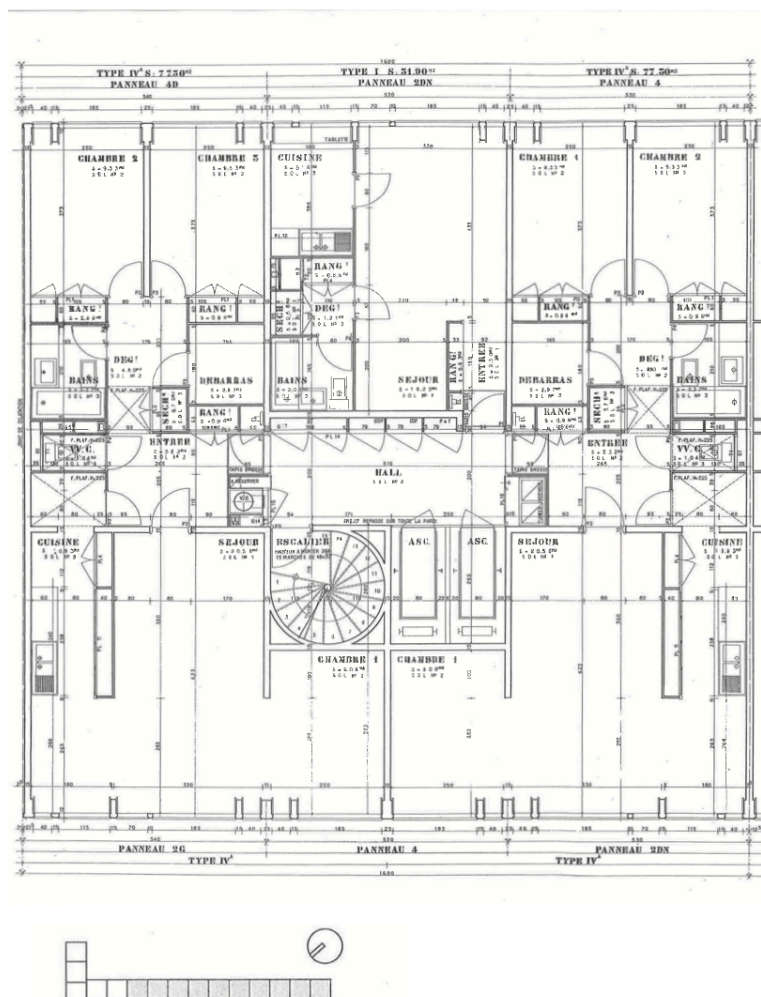
Figure 124. Jean Dubuisson, floor plan of Maine-Montparnasse, units D, E, F, G, H, I, J, K, L, M, 1959-1964.
© Fonds Dubuisson/Siaf/Cité de l'architecture et du Patrimoine, Archives d'architecture du XXème siècle.

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[60] Caillot and Monnier.
[61] Ibid.
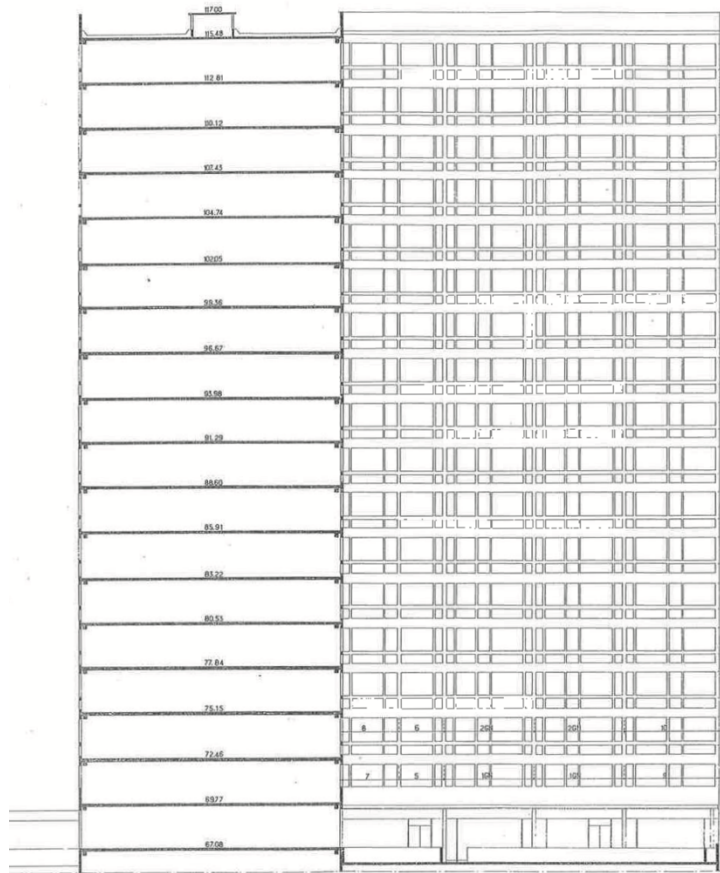
Figure 125. Jean Dubuisson, section of Maine-Montparnasse, south-east, 1959-1964. © Fonds Dubuisson/Siaf/Cité de l'architecture et du Patrimoine, Archives d'architecture du XXème siècle.

Figure 126. Jean Dubuisson, elevation of Maine-Montparnasse, south-east, units H, I, J, K, L, M, 1959-1964. © Fonds Dubuisson/Siaf/Cité de l'architecture et du Patrimoine, Archives d'architecture du XXème siècle.

Both of the Maine-Montparnasse buildings follow a similar design aesthetic, with their characteristic façades of repetitive grids, reminiscent of a tartan pattern. One of Jean Dubuisson's signature design approaches, the grid allows for a continuous articulation of the façade through an abstraction that creates non-monotonous visual interest and simultaneously manages to blur the functions of the spaces behind it and the scale of the building. For Dubuisson, this design was the result of his attempt to achieve "the greatest simplicity of structure"[62] by relocating the supportive structure to the interior of the building and allowing the façade to remain light and completely glazed, thus providing the maximum comfort to the occupants but at the same time creating a work of art to be occupied. The design approach shows direct influences from the Bauhaus and Scandinavian architectural methods,[63] as well as the influence of Mies van der Rohe and Walter Gropius. Through the steel and glazed façades, that hide behind them a repetitive concrete grid structure, the design expresses a "rationalist aesthetic", positioning Maine-Montparnasse as one of the most representative examples of modern Parisian architecture of the 1960s.[64] A similar approach that emphasises the façade through non-load-bearing structure and irregular grids can be seen in other residential and urban projects by Dubuisson, such as the SHAPE village in Saint-Germain-en-Laye (1951) and the Résidence du Parc housing project in Lacépède in Croix (Nord) (1956). These projects, including the Maine-Montparnasse complex and others, were among Dubuisson's most significant achievements: in 1945 he had won the Prix de Rome, a scholarship which allowed him to live in Rome and Athens and study classical architecture; his studies, however, resulted in some of France's most characteristic modern architecture.

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[62] Jean Dubuisson and Armelle Lavalou. *Jean Dubuisson par lui-même*. (Paris: Éditions du Linteau, 2008), 59.

[63] Eric Lapierre. *Guide d'architecture Paris 1900-2008*. (Paris: Pavillon de l'Arsenal, 2008).

[64] Bertrand Lemonnier. *Guide d'architecture – France 20e Siècle*. (Paris: Picard, 2000), 160.

Figure 127. Jean Dubuisson, SHAPE Village, Saint-Germain-en-Laye, 1951-52. View of the main façade. © Fonds Dubuisson/Siaf/Cité de l'architecture et du Patrimoine, Archives d'architecture du XXème siècle.
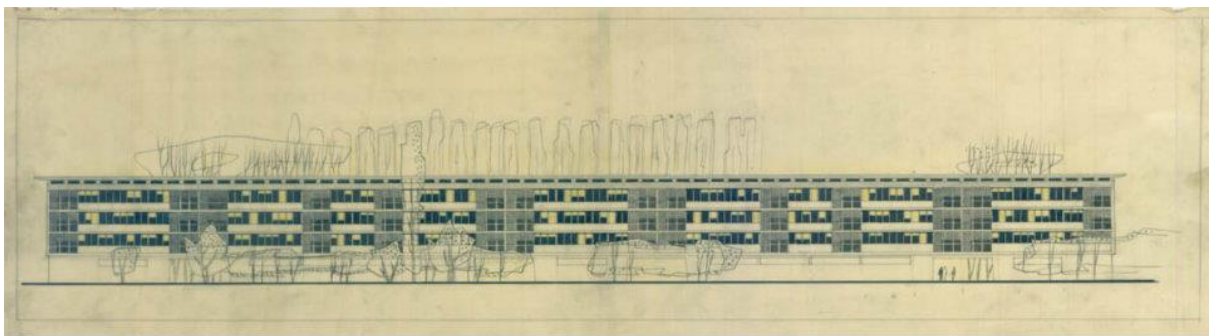
Figure 128. Jean Dubuisson, "Résidence du parc" housing project in Lacépède in Croix (Nord), 1956. © Fonds Dubuisson/Siaf/Cité de l'architecture et du Patrimoine, Archives d'architecture du XXème siècle.

Figure 129. Close-up photograph of apartments. Photograph from the blog "Le courier de l'architecte".

Today, as the passer-by walks down rue Commandant René-Mouchotte and the well-maintained buildings of Maine-Montparnasse, they can get small glimpses of the Mouchotte façade. The building's length would have given a continuous view of the grid façade from across rue Mouchotte were it not disturbed by the parking entrances, shops, and trees of the Modigliani terrace between the building and the street. Across the building there are only a few low-rise buildings that cannot offer a more elevated point of view, with the exception of the high-rise hotel. The lack of windows on the hotel's façade facing the Mouchotte makes a panoramic "en-face" view of the Mouchotte façade impossible. Photographic depictions of the building usually are skewed perspectives or obstructed views, and almost always show only segments of what is a colossal length of variously changing series of orthogonal windows, each as distinct as the occupants behind them. The Jardin Atlantique, that lies at the interior of the complex, offers the only position from which to get a view of the full length of the façade that is least obstructed, which again is interrupted by the park's landscape and trees. To get a feeling of the exterior of the building as a whole, the viewer has

to construct the image in their mind by combining their knowledge of the building's form as it is presented in the architect's physical model[65] and the small glimpses of detail that can be glimpsed in between the obstructions.

How, then, can this building be viewed in its entirety, and its architectural significance experienced, with no obstructions and avoiding reliance on a fictional mental recreation? The answer to this was given in 1993 in the form of Andreas Gursky's photograph *Paris, Montparnasse*. Measuring 2.1 by 4 metres, the photograph presents a panoramic view of the Mouchotte façade at a large scale. The Mouchotte building takes up most of the image, leaving a very narrow strip of grey sky at the top, while the lower part of the image shows the Modigliani terrace with its vegetation and behind it the piloti of the building. Adopting the well-established objective, straightforward and neutral aesthetics of the Düsseldorf School of Photography, the photograph adheres strictly to an approach involving straight lines, muted colours, grey sky, and little shadow, presenting the façade as flat as possible, so that it almost resembles an elevation drawing.

Figure 130. Photograph from the jardin Antlantique. Photograph from the blog "Le courier de l'architecte".

Paris, Montparnasse, however, is neither a drawing nor a single photograph. It is in fact a collage of photographs taken by the photographer, edited and retouched to compose the building's façade as a whole into a single reconstructed image. Taken in 1993, it is one of the earliest works in which Gursky used digital editing. According to the photographer, his first digitally edited photograph was taken in 1992: "It was a photo I took at Charles de Gaulle airport in Paris. There were certain intrusive details that would, in the end, have stopped me from using the image. And then I decided to

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[65] Jean Dubuisson. "Immeuble d'habitation Maine-Montparnasse, Secteur II, Rue Du Commandant-Mouchotte, Paris 14e: Vue de La Maquette." (Paris: Direction de l'urbanisme, Centre de documentation et des relations extérieures, 1970).

replace them with other details that I found more interesting".[66] In *Paris, Montparnasse*, the use of digital manipulation seems to serve a similar purpose, but at the same time several other more conscious motives drive the application of photo manipulation in creating this work of art. The image is composed of two separate photographs,[67] creating a monumentally long photographic representation of the Mouchotte façade, something that is impossible to capture in the way it is presented in the wide-angle photograph above. The two photographs are seamlessly joined so that the eye cannot discern where one ends and the other begins. The perspective distortion of the original photographs is edited out and the result is a strictly linear building, a graphic grid and an uncompromising composition. Other visual manipulations include the expunging of intrusive details and colour editing, actions that were necessary in the process of seamless collaging, but also for creating the visual impact that defines this image.

The framing of the final image is a large component of the editing process to produce the image's intended effect. The four-metre length of the final image shows the continuous grid of the Mouchotte façade, from edge to edge, giving an overwhelming sensation of an infinite grid. The building sits upon a dark slim strip – the Modigliani terrace – and above this it is bordered by a light grey sky, the width of which is precisely a fifth of the total 2.1-metre height. The dark colouring of the terrace and the lightness of the sky are trimmed relative to their purpose; the slim dark grey terrace functions as the foundation of the building and the convoluted graphic that is the Mouchotte façade, while the light grey wider strip at the top gives enough 'air to breathe' and emphasises the horizontal linearity of the building. The overall image is framed in a very narrow white border and an additional darker grey frame. When exhibited the image is positioned about half a metre from the ground so that the average person's eye level reaches at the top half of the building. Its 2.1-metre height requires the viewer to look at the image from a certain distance, and even then, the effect of its length is still considerable.

The colours of the photograph are muted, yet they come through with a distinct purpose. The light grey colour of the sky is reminiscent of the Bechers' use of a neutral background. The neutrality of the background detaches the subject from its context, and having no other reference the viewer relies on the title of the photograph to identify its location. Unlike the Bechers, Gursky employs colour in his photographs. In *Paris, Montparnasse*, as in most of his other work, the colours come across as muted, dispassionate and lacking in vibrancy, and they seem to have a purpose which is more rudimentary than that of giving life to the image. The tone of the colours, along with the lack of shadows, emphasises the flatness of the subject, an effect that is also seen in *99 Cent II* (2001) and other similar works. Colour here takes on the role of indexing, of identifying differences in a sea of similar objects, giving the images a documentary style that links Gursky with the Düsseldorf School

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[66] *Contacts: Andreas Gursky*. France: Arte France, 2004. https://www.arte.tv/fr/videos/098561-003-A/contacts/.
[67] Alona Pardo, Elias Redstone, and David Campany. *Constructing Worlds: Photography and Architecture in the Modern Age* (London: Prestel; Barbican Art Gallery, 2014), 21.

of Photography.[68] The colours found in *Paris, Montparnasse* distinguish the various windows of the grid, allowing the viewer to both seek them out or get lost in their interchanging variations among the repetitiveness of the grid. From a distance the abstractness of the grid is enhanced by the varying colours of the windows, transforming the Mouchotte façade into an abstract painting – a more complex, albeit muted, version of a Mondrian.

Figure 131. Andreas Gursky, 99 Cent, 1999, chromogenic print face-mounted to acrylic, 207 × 336.9 cm, San Francisco Museum of Modern Art (SFMOMA). © Andreas Gursky. All rights reserved.

Gursky's photographs are often compared to paintings and his methodology to more traditional artistic practices. Art historian Beate Söntgen discerns in Gursky's work an "extreme complexity as a form of pictorial language"[69] with many similarities to the sublime as expressed in Romanticism.[70] Curator Stefan Gronert furthers this comparison, mentioning that Gursky's composition, visual structure, use of scale and colour, and sporadic lack of titles give them a certain similarity to abstract painting. In fact, Gursky's relationship with photography seems to revolve around a more hands-on approach, with a level of control and editing capacity that makes the end result more pictorial than photographic. This is due as much to the use of digital editing since the 1990s as it is to Gursky's use of photography to create new worlds that has been a characteristic of his

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[68] Stefan Gronert. *The Düsseldorf School of Photography*. (New York: Aperture, 2010), 55-58.

[69] Gronert, 57.

[70] Beate Söntgen. "Le vertige des sens: les images photographiques d'Andreas Gursky." In *Objectivités: La Photographie a Düsseldorf* (Munich: Schirmer, 2008), 282–86.

work since the 1980s.[71] Gursky's photographs, therefore, are less photographs in the traditional sense, in that they do not portray what exists, nor do they have any relation to time itself: instead, they create anew using photographic fragments as the bricks and mortar of the new pictorial representations.

These newly created worlds bear with them an exaltation and magnificence that, though beautiful and engaging, also succeed in provoking a sense of uneasiness. The barrage of emotional responses evoked by looking at one of Gursky's photographs is comprehensively expressed in Edmund Burke's *A Philosophical Enquiry into the Origins of our Ideas of the Sublime and the Beautiful* (1757): his definition of sublime encapsulates all the feelings of trepidation, vastness, light and loudness and more, rendering one incapable of rational thought, that are found in Gursky's work. Burke's understanding of the sublime as this overwhelming sensation is approached from quite a different perspective to that in Immanuel Kant's[72] observations on the same subject. While Burke places more emphasis on the effects of sublimity than the psychology of the one who is experiencing it, Kant follows a more critical approach to the subject's mental state and questions their capacity for comprehension and imagination of that which causes the effects of sublimity. Despite their different analytical approaches, however, they both share a similar disposition in expressing the sublime as a revolutionary means to subjectivity through excess.[73] And excess comes in many forms in Gursky's photographs, in the immeasurable number of objects portrayed in *99 Cent* or the endless series of windows in *Paris, Montparnasse* and the rows of corridors in *Shanghai* (2000), in the vastness of space in *Klausenpass* (1984) and the perpetually undulating roads of *Bahrain I* (2005). For the sublime is a constant in his works, sometimes less and others more, but always expressed through more than one means, becoming a methodological approach of composition and eventual intention.

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[71] Michael Fried. *Why Photography Matters as Art as Never Before*. (London; New Haven, CT: Yale University Press, 2008), 162.

[72] Jean-François. Lyotard, *Lessons on the Analytic of the Sublime* (Stanford, CA: Stanford Univ. Press, 1995), 23-29.

[73] Edmund Burke, *A Philosophical Enquiry into the Origins of Our Ideas of the Sublime and Beautiful*. Adam Phillips, ed. (Oxford; New York: Oxford University Press, 1998), ix.
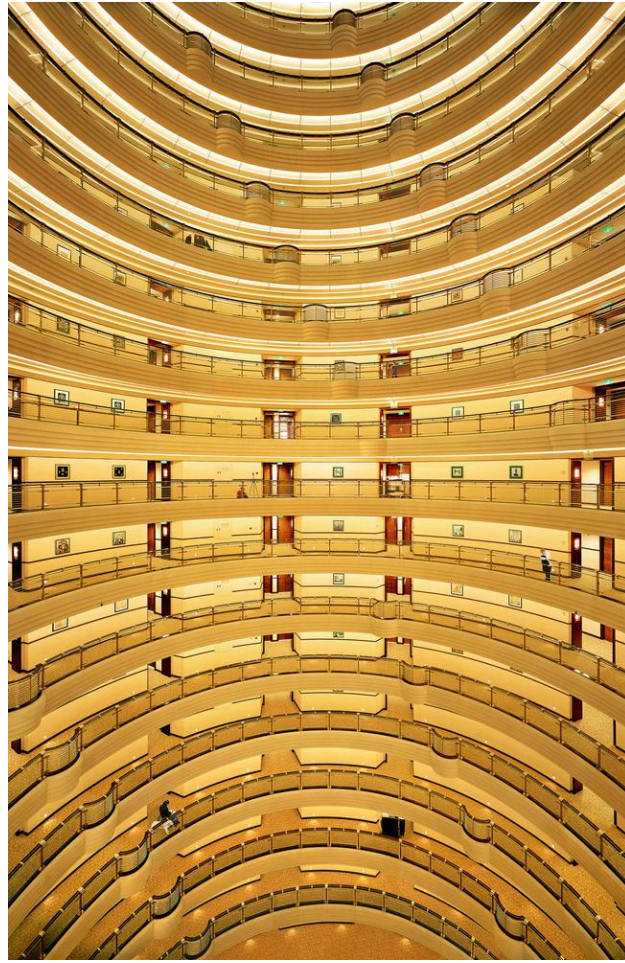
Figure 132. Andreas Gursky, Shanghai, 2000, chromogenic print mounted on Plexiglas, 301.5 x 206.5 cm.

Figure 133. Andreas Gursky, Klausenpass, 1984, chromogenic print, 63.2 × 77.8 cm.

If the notion of the sublime is considered in addition to references to Romantic landscape painting, then Gursky's worlds can be placed side by side to works of leading painters from the Düsseldorf School of painting, such as Andreas Achenbach (1815-1910), Johann Wilhelm Schirmer (1807-1863), and others whose creations provoked awe and sublimity. And seeing these works together it will become more obvious that in creating worlds, the composition requires a certain methodology that structures the image and eventually helps to inspire the sublime. This compositional technique, titled *repoussoir*,[74] is a device that helps direct the viewer's eye by "pushing" their attention to focus on the image. Through the placement of objects, or through dynamic lines and perspectives, the image comes into its own, balanced and structured to pull the viewer in. The use of this device is seen frequently in Gursky's photographs, and in *Paris, Montparnasse* the measured distances between foundation, building and sky, the intermittent trees that cluster in the middle of the picture, and the single treetops that are equally distanced from both ends of the picture, are some of the visual devices enlisted to keep the viewer's eye focused on the image.

In Burke's analysis of the sublime another major aspect revolves around the notion of vastness, and this is a topic that Gursky approaches again from multiple perspectives. For Gursky, vastness is the expansiveness of his worlds that continues endlessly to infinity. In *Paris, Montparnasse* it is the limitless façade that is implied to continue beyond the borders of the frame. In other works, such as *Shanghai,* instead of the horizon the spaces take on a vertical infinity. Vastness is also evoked by the relation of details to the scale of the image that is achieved through the excess of small things, such as the grid's detail and the further details of what lies behind the windows. And it is through the *tableau,* another reference to painting, that Gursky's works can be distinguished from those of his contemporaries – the monumental size of his photographs in which the closer the viewer gets, the more details are uncovered.

The Düsseldorf School of Photography signature style of the large-format *tableau* form[75] is taken by Gursky to an entirely different level. Printing photographs that exceed three metres in length or height, his photographs eclipse even the large-scale photographs created earlier by Höfer and Struth, that barely reached two metres, applied here in a distinctly unique way. Like his tutors, Bernd

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[74] Peter Howard, *An Introduction to Landscape* (London: Routledge, 2016), 97.

[75] As introduced in previous chapters, the first class of Bernd and Hilla Becher employed large-format photography (photographs taken with cameras that have an image format equal to or larger than 9 x 12 cm) in the majority of their work. Although some cases where a 35mm camera was used may be found in their earlier work, the movement is directly linked to the use of this kind of camera and its presentation on the wall (tableau) which is mentioned in Gronert's account as well as in other descriptions on the movement. The large-format camera's higher resolution and capacity to capture a larger area could also produce larger prints such as Höfer's and Struth's large-scale prints mentioned here, but it is due to photomontage (image splicing) that Gursky achieves his monumental prints.

and Hilla Becher, Gursky aims to "create an encyclopaedia of life",[76] but instead of archives and typologies he approaches it through encapsulating "mini worlds" into a single image which itself adopts the necessary scale to accommodate the new world. Gursky employs the micro and macro to create abstraction as much as to provide an "overview" of all the little details that define the subject. In a single glimpse the viewer sees a collective documentation that imparts the essence of what the photograph intends to be – its message. In *Bundestag, Bonn* (1998) it is the visualisation of German democracy, in *99 Cent* it is mass consumerism,[77] and in *Hong Kong, Stock Exchange* (1994) the chaotic intangibleness of the economy.[78] Through these micro-macro views Gursky attempts to give an insight into those elements that construct reality,[79] and at once reconstructs replicas of these notions.

In *Paris, Montparnasse*, therefore, the Mouchotte façade has both a literal and metaphorical existence. It consists of a vision of the Mouchotte building as it can never be seen in its entirety, but it is also a vision of the modern – in both its interpretations as the current moment and as a movement/ lifestyle. There is order and an attempt at individuality, depending on how closely one looks. References to globalisation and a lack of individuality are easy to make when viewed from a distance.[80] The abstract repetitive grid that shows only a few glimpses of colour and nothing more from this distance, the Modernist design that is intended to be international, and the grey sky that could belong to any place add to this interpretation of a low-income housing that is impersonal, orderly and efficient. And of course, in turn this modern impersonality comes to controversially respond to the title, *Paris, Montparnasse,* an area where both the bourgeoisie and artists gathered; a place where Eugène Atget had a small apartment, a location that Ernest Hemingway frequented and wrote his synonymous poem about. But, when viewed in further detail, "as our eyes roam from one window to the next, we unconsciously slip into the stance assumed by the lead in Alfred Hitchcock's Rear Window",[81] transforming the viewer into a voyeur. There is an impossible detail that can be seen through the windows; curtains, plants, personal objects and the occasional impression of someone's shadow or of a lamp turned on, indicating that someone might be close by. This now becomes a different Montparnasse, a village of a different class of people, from a different time.

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[76] Andreas Gursky, Martin Hentschel, Krefelder Kunstmuseen (Germany), Moderna Museet (Stockholm, Sweden), and Vancouver Art Gallery. *Andreas Gursky: Werke 80-08 = works 80-08: Kunstmuseen Krefeld, Moderna Museet, Stockholm, Vancouver Art Gallery*. (Ostfildern, Deutschland: Hatje Cantz, 2008), 20.

[77] Gronert, 57.

[78] Alix Ohlin, "Andreas Gursky and the Contemporary Sublime," *Art Journal* 61, no. 4 (2002): 22–35, https://doi.org/10.2307/778148.

[79] Stefan Gronert. "Reality Is Not Totally Real: The Dubiousness of Reality in Contemporary Photography." In *Grand Illusions: Demand, Gursky, Ruscha.* (Bonn; North Miami: Kunstmuseum Bonn; Museum of Contemporary Art, 1999), 12–31.

[80] Ohlin, 28.

[81] Martin Hentschel. "The Totality of the World, Viewed in Its Component Forms." In *Andreas Gursky: Werke 80-08 = Works 80-08: Kunstmuseen Krefeld, Moderna Museet, Stockholm, Vancouver Art Gallery*. (Ostfildern, Deutschland: Hatje Cantz, 2008), 28.

Gursky allows the viewer to experience the architecture of the building in ways that are only hinted at in real life in the present. He gives the viewer a front seat to the façade that plays out like a theatrical play, each window a different story, every perspective a different narrative, a still from *Des infants gâtés* multiplied in the thousands. Through this contiguity, a result of seamless digital collage and the repetition of the grid that occurs from the architecture of the building, Gursky presents, through a cinematic still, relationships that can only be understood as associations of proximity that exist together.[82] The building turns into a monument to social architecture, the Mouchotte as a paradigm of social activism, the photograph into an interpretation of Modernist social housing. Gursky is at this moment the architect of *Paris, Montparnasse*, a flattened world that evokes the uncanny, reminiscent of the Mouchotte building in Paris yet quite different from the real.

By working within strict boundaries, Gursky manages to preserve a very strong sense of the uncanny. His creations always conform to the laws of reality, unlike other digital photographers such as Filip Dujardin, whose creations leave more room for doubt about the feasibility of the structures he presents. Gursky's world is a flat façade, an architectural element that functions as a border between the outside and the inside, the public and the private. Through both photography and architecture, the façade becomes perforated and allows the viewer a momentary partial view beyond it. For Gursky, the façade is a book of stories, similar to the way façades functioned for Walker Evans,[83] who not only identified that both photography and architecture shared common attributes in their representation of the ideas and notions that shape a society, but used photography as a medium to "read" architecture, breaking it into parts and symbols to extract deeper messages. Evans saw the existing images he photographed as "found montages",[84] a combination of smaller images, various small messages combined to create a larger one. Gursky actively devises these messages by constructing his own montages using architectural elements – in this case the images of the Mouchotte façade – building something that is more "complete" to express those messages.

In this particular example of the Mouchotte, and to varying degrees in his other works, Gursky uses visual devices to challenge the viewer's understanding of the "real" and the possibilities of the fictional. He may be reconstructing his own versions of reality in a two-dimensional medium, but the messages expressed are on topics that have a direct effect on the actual reality the viewer occupies, and consequently the architectural space that defines it. The strategies evinced in Gursky's work are a way of critically analysing and identifying the nature of architecture in the wider context of social, political, economic and other human-centred issues that need to be taken into account. In the

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[82] Jean-Luc Godard and Youssef Ishaghpour. *Cinema: The Archeology of Film and the Memory of a Century*. (Oxford: Berg, 2005), 76.

[83] Jean-François Chevrier, Walker Evans, and Dan Graham. *Walker Evans & Dan Graham: [Witte de with Center for Contemporary Art, Rotterdam, 29.08.1992-11.10.1992 ... Westfälisches Landesmuseum für Kunst und Kulturgeschichte, Münster, 31.01. - 21.03.1993 ...].* (Rotterdam: Witte de With, 1992).

[84] Alona Pardo, Elias Redstone, and David Campany, 30.

same way in which Gursky allows the viewer to view an architecture that is otherwise impossible to view as a whole, the visual strategies he uses, and the critical approach he applies, are another way of determining these issues that can be addressed by both photography and architecture in equal measure.

Conclusion: Photography as a means to show what cannot be seen

The Elbphilharmonie and the Mouchotte building are two sides of the same coin, two similar approaches to communication with either a passive or an active effect on architectural space. The Elbphilharmonie is a case of political and financial motives acting through imagination and creativity to achieve a physical presence, whereas the Mouchotte building is an example in which, through its reconstructed representation, architecture becomes something more: not merely a symbol, or a distinct architectural building, but a gate through which architecture may be able to respond to issues of a more social nature. They both ask questions, about both the interpretation of architectural space and the boundaries of the architectural discipline in terms of defining the role of architecture. Each also contradicts the other in their deciphering of the photographic image as a construct, a capture of reality, of its mode of financial evaluation and its position in the context of photography as art. These questions, curiously, arise through the practice of photography and its own challenges relating to reality and fiction and its potential to turn the unreal to reality and reality to the unreal. While this prospect has shaped the development of artistic photography and is successfully utilised by photographers, in architecture the Elbphilharmonie or the Mouchotte building are exceptions to the rule; reality and fiction are a medium of expression or investigation without effectively acknowledging the photograph's capacity to blend these ideas that could lead towards an enriched experience of space, whether physically or ideologically. These cases present the challenges faced in both photography and architecture regarding the complexity of what constitutes "reality" and their potential in upending it. From an architectural point of view these studies propose a more considered standpoint in architectural thought, opening up the potential for more lessons to be learned by architecture on the potential of reality and fiction through a photographic approach.

Abstraction

Figure 134. Georgiana Houghton, The Eye of the Lord, 1870, watercolour and gouache on paper on board, 25.3 x 35.6 cm

Introduction

In his writings, Peter Eisenman has pointed out that vision is an inextricable part of what defines architecture. Even though architecture is not an entirely visual field, it has, and continues to be, intrinsically linked with ideas of vision and perception. For Eisenman, "architecture assumes sight to be pre-eminent and also in some way natural to its own processes, not a thing to be questioned". He continues by stating that this has changed with the arrival of the digital age, which essentially questions the architectural definition of sight which had until then been the established one.[1] Moving beyond the effects that the *electronic* paradigm has had on architecture, Eisenman has also pointed out that the subject of vision in this discipline still remains rather conservative and anachronistic. This can be seen to a significant extent, especially when compared to the visual developments taking place in

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[1] Peter Eisenman, 'Architecture After the Age of Printing (1992)', in *The Digital Turn in Architecture 1992-2012*, ed. Mario Carpo (Chichester, West Sussex: John Wiley & Sons, 2013), 15–27.

the arts.[2] On the other hand, architectural ideas explored earlier in this thesis, such as the identification of type, the definition of the *vernacular*, the positioning of the human being in space, and the inquiry into architecture's relation with the concept of *reality*, are all founded on an exploration of different ways of seeing. This is seen in the diagrammatic representation of space in constructing their typologies, the symbolic elements of *vernacular* architecture, the insinuation of presence through design, and the promotion of a concept through visual constructs. It is through the challenging of perceptions and questioning established notions that these ideas have helped to further the development of architecture that is otherwise in practice still informed by fifteenth-century studies on perception of space.

Through all these various ways of seeing, it can be distinguished that at their root lies not so much a way of vision but more a way of thinking. It is how things and ideas are being perceived, and hence expressed, that help to present new or alternative propositions in architectural discourse and practice. Perception then might be applied as a distinct analytical methodology in reviewing existing concepts, such as the examples mentioned above, or explore others from different fields, from an interdisciplinary standpoint enriching both or either discipline. In all of these cases a different perceptive stance was implemented that required a specific focus on the subject at hand. Beyond this focus, however, it can be discerned that the architects and researchers also had to be selective and "curate" the information, acknowledging, filtering, and expressing only the information that was pertinent for the development of these conceptual routes. Within this context, perception takes on an engaged role between vision and thought that allows for a filtered analysis of the subject that begins the creation of a concept.

In this chapter this analytical methodology of perception is identified through the practice of abstraction, which, as will be further examined, has been deeply involved in architectural developments, yet has not received as much recognition as a distinct architectural conceptual practice per se. On the other hand, abstraction is found in the art world to have met with significant interest and analysis, both theoretically and practically. Theorists of the 1950s and 1960s such as Rudolf Arnheim and James J. Gibson devoted a substantial amount of their work to the exploration of perception through an artistic and psychological perspective. Within this, abstraction holds a significant position in forming concepts and balancing between subject and thought. The term "abstract" can have several meanings, which will be explored here and juxtaposed with different methods within architecture and art. Through these developing ideas of abstraction, the chapter will begin by investigating how there was an increased interest in, and exploration of, the term during Modernism and its effects on its development henceforth, visiting examples by more recent architects that retain influences from these Modernist learnings. At the same time, it will explore how artists,

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[2] Rudolf Arnheim's *Art and Visual Perception: A Psychology of the Creative Eye* (1954) focuses on the subject of visual developments and their relevance to the arts.

and in particular photographers, have been exploring, in this relatively recent timeline, notions of abstraction, its meaning as an artistic and visual practice and its importance as a conceptual practice. From behind their lens these artists have approached architecture in an exploratory and critical way, identifying ideas and notions that can only be identified through the abstract, whether conceptual, symbolic, or subtractive.

Figure 135. Vasily Kandinsky, Komposition V, 1911, oil on canvas, 190 x 275 cm.

Abstract, abstraction, and psychology

Nebulous by definition, abstraction is a term that is difficult to interpret clearly, especially when it is encountered in various forms and in different fields of research and practice. It rose in importance in the nineteenth century[3] and was present in the developing artistic and architectural movements of this period, including Abstraction, Modernism, Conceptual art, and Minimalism, which continue to

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[3] The exhibition "Inventing Abstraction, 1910-1925: How a Radical Idea Changed Modern Art" held at the Museum of Modern Art (MoMA) in New York (from December 2012 to April 2013) situated the emergence of Abstract Art in the early 1900s with a focus on one artist who is considered to have been the leading figure in Abstraction, Vasily Kandinsky. According to MoMA, the first occasion on which Abstract art emerged was in 1911 when Kandinsky's *Komposition V* appeared. However, there are instances of art featuring abstractive methods and qualities decades earlier by artists such as Georgiana Houghton and Hilma af Klint whose works date from the late 1870s and 1890s. Andrea Meyertholen, *The Myth of Abstraction: The Hidden Origins of Abstract Art in German Literature* (Rochester, N.Y.: Camden House, 2021), 1-6.

influence art and architecture today, either directly or through association. Looking at how abstraction continues to be explored in the visual arts and photography, abstraction of space and architecture might be something that goes beyond that which is seen, but which is experienced. Peter Halley makes a few salient remarks on the subject;[4] as an artist, theorist, and someone who has lived through formative years, he positions abstraction as a defining concept of our time, gaining prominence in the footsteps of World War Two, in the reforming of society politically and culturally, in the progress of technology and the globalised spread of capitalism. Abstraction defines the modern understanding of a society that measures progress through numbers, that thinks not only in the present and in the real but also exists in the hyper-real. It acts as a medium to ideate and comprehend such notions, transforming the world around us through these abstract ideas. All these events and formative ideas preceded Modernism, yet they found fertile ground during the decades of transformation after the 1920s with the results becoming clearly felt in the 1970s and 1980s, the time during which Halley was making his observations. Abstraction has now become an inseparable part of our contemporary society, defining our thinking, and understanding, yet it is difficult to judge how much it is acknowledged for what it is. In art, abstraction has been deeply and extensively explored, yet beyond it, in the physical everyday world, abstraction exists behind the scenes.

Abstraction exists at the crossroads of art, perception, psychology, and interpretation; in each field it is expressed in varying degrees, which theorist and perceptual psychologist Rudolf Arnheim describes as "levels of abstraction".[5] For Arnheim, abstraction is a form of expressive freedom; he describes it as a process in which the artist reduces the subject to its most basic elements which are then represented through a less descriptive yet still a somewhat identifiable fashion. This kind of abstraction is found in works of primitive cave drawings, in the work of abstract painters such as Vasily Kandinsky and Kazimir Malevich and in that of sculptors such as Constantin Brâncuşi and Alexander Calder. The production of abstract art is executed through a method of omission by which the artist encapsulates his concept in form. Deriving from the Latin word *abstrahere,* abstraction is often understood as a means to separate or remove part from a whole. It can be by picking something out of a larger part in order to bring more focus to the individual or through this action to capture the idea that forms this larger part. Edmund Husserl refers to this process as *abstrahere ab aliquo* and *abstrahere aliquid* to separate the different outcomes: sometimes the second comes from committing the first and links the practice of abstraction to the conception of ideas.[6] In this case, the artist who practises abstract art can be understood to be abstracting parts of a larger whole in order to reach the idea that lies at its centre. This practice, lacking any specificity and employing techniques or methods

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[4] Peter Halley, "Notes on Abstraction," *Arts Magazine*, June 1987, https://www.peterhalley.com/notes-on-abstraction.

[5] Rudolf Arnheim, *Art and Visual Perception: A Psychology of the Creative Eye* (Berkeley, CA: University of California Press, 2011), 144-152.

[6] Daniele De Santis, *Husserl and the A Priori: Phenomenology and Rationality* (Cham: Springer International Publishing, 2021), 158.

of representing without exact portrayal, in some cases by means of generalisation, simplifying complexity or adopting a different language of basic geometry or symbolism, might result in art which, when experienced, leaves a lot of room for interpretation, not for any other reason but the fact that there might be simply more than one idea that emerges through the abstraction.

These processes of abstraction acquire a visual presence in the arts where the artist practises various levels of abstraction to attain their concept. In the example of *The Eye of the Lord* (1870), a drawing by British artist Georgiana Houghton, who was linked to the early Spiritualist movement in Victorian England, the process of abstraction is a "performance" that was being described as a communion with spirits, which was actually a form of automatic drawing process, resulting in paintings that are meant to depict the supernatural, an abstract and non-objective depiction through layers of colours and swirling lines.[7] Later, Kandinsky, similarly, attempted to portray subjects that do not have a definite visual presence, such as experiences and events, as seen in *Composition V* (1911), stepping away from the concept of art as a description of reality or imagination and moving towards art as a medium to elicit an apprehension through the absence of description. *Composition V* is described as using symbols or "shamanistic motifs"[8] as his abstractive *language* by some, by others as an "apocalyptic work"[9] composed by a flurry of activity resulting in a chaotic event. In these two examples, the *levels of abstraction* are not to be used as a measure of complexity of thought or process but instead as a signifier of perception; even the titles used for these works are abstract, allowing for various interpretations, yet always in some way consistent with the message intended by the artists.[10] Arnheim, while analysing his *levels of abstraction*, uses the example of primitive drawings to draw this point and adds the element of interpretation where symbols, or in this case "physiognomic" qualities, act as an added level of clarity in this form of abstract representation. It is therefore quite simple to grasp the notion of abstraction, but at the same time a complex task to express what abstraction is, and how it is practised. It is not a singular practice but requires a combination of other methods that will allow the freedom of "withdrawal" yet still retain a semblance of reference and understanding.

Abstract art, a term that might seem contradictory, according to Arnheim, still requires a measure of representation, such as the symbolism seen in Kandinsky's motifs, which J.J. Gibson

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[7] Georgiana Houghton et al., *Georgiana Houghton: Spirit Drawings* (London: The Courtauld Gallery, 2016).

[8] Dan Pan, "Primitivism in Art," in *Primitive Renaissance: Rethinking German Expressionism* (Lincoln: University of Nebraska Press, 2001), 106.

[9] Jeffrey Morrison and Florian Krobb, Text into Image, Image into Text: Proceedings of the Interdisciplinary Bicentenary Conference Held at St. Patrick's College, Maynooth (the National University of Ireland) in September 1995 (Amsterdam: Rodopi, 1997), 122.

[10] In both descriptions of Kandinsky's work, they are supported, in the first case, by similar approaches by artists using representational motifs during Kandinsky's time, which he was attempting to replace with abstract ones, and in the second through Kandinsky's own essay "Wither the 'New' Art?" where he refers to a Biblical and Nietzschean apocalypse.

describes as *invariance,*[11] a continuity between abstraction and perception that allows for a certain comprehension of the subject that was abstracted and the result of the abstraction. This can also be translated into a cultural *language*[12] that becomes necessary for abstract art to be understood as Abstract art. Architect and theorist Christian Norberg-Schulz describes that viewing "abstract" art is a challenge that requires a higher level of perceptive performance.[13] This would suggest that abstract art is an exercise in perception, a challenge that critically questions and repositions habitual views. The process of taking something from something else, reducing it to a more fundamental or essential state, could also be compared to distilling, removing the extraneous to allow the principal to emerge. Gibson takes a more scientific approach than Arnheim, but in essence expresses a similar understanding of the notion of abstraction, that it is an inherently perceptive element that can either remain simply at the level of perception or be expressed through representation, as takes place in Abstract art. He distinguishes two sides to visual perception, one being "literal perception" and the second "schematic perception"; he describes the latter as "fluid, subjective, creative, and inexact",[14] definitions that also belong under abstraction. Between perception and expression, a number of other cognitive practices take place that can be seen to complicate the understanding of abstraction and to give it a variety of ways in which it can be expressed. In the artistic and philosophical context, Gibson finds that the perception of space and symbols is one of these cognitive practices that requires an establishment of "fundamentals", not only to avoid confusion but also to allow for a common understanding and communication. It is not without reason then that Gibson takes his more scientific route to analyse abstraction, often correlating it to processes of physics or mathematics where the principles are universal.

Abstraction, as Arnheim and Gibson identified, has also been seen as deeply related to psychology, and even more so when it comes to artistic expression. Abstraction as a cognitive process is often present in discussions on Gestalt psychology. Both abstract art and experimental Gestalt theory share an intertwined history:[15] abstract art and the visual stimuli used in psychological experiments have many things in common (the Rorschach test is such an example[16]). With the exception of a small number of artists, such as Paul Klee, who used some of psychologist Max Wertheimer's diagrams in his work *Blue Night* (1937),[17] the research and development of abstraction

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[11] Robert W. Witkin, 'The Psychology of Abstraction and the Visual Arts', *Leonardo* 16, no. 3 (August 1983): 200–200, https://doi.org/10.2307/1574914.

[12] This might be regional or global, such as seen in the semiotics of the colour white; in many Western countries today, it is linked to concepts of purity and innocence, while in Asian countries it is linked to death and mourning.

[13] Christian Norberg-Schulz, 'Perception', in *Intentions in Architecture* (Cambridge, MA: MIT Press, 1965), 27.

[14] James Jerome Gibson, *The Perception of the Visual World* (Westport: Greenwood Press, 1977), 212.

[15] Crétien van Campen, 'Early Abstract Art and Experimental Gestalt Psychology', *Leonardo* 30, no. 2 (August 1997): 133–36, https://doi.org/10.2307/1576424.

[16] Hermann Rorschach, *Psychodiagnostik* (Berne: Verlag Hans Huber, 1921).

[17] Marianne Teuber, "Blue Night by Paul Klee", in Rudolf Arnheim and Mary. Henle, *Vision and Artifact* (New York: Springer, 1976).

in these two areas does not seem to often overlap. However, artists working with abstraction, like Paul Klee, showed an interest in Gestalt theory as a "scientific validation of age-old principles of composition and layout".[18] This is a different approach to Abstract art from what was seen previously in Houghton's and Kandinsky's approaches, which showed a more spiritualist or theosophist reasoning.[19] This scientific approach of Abstract art communicated principles of envisioning and expressing in abstraction, removing the extraneous to allow the "pure visibility" (*Sichtbarkeit*)[20] to emerge. This had a formalistic, as much as economic, expression, resulting in abstraction being associated via its association with the Gestalt theory to the modernist "aestheticism".[21] Therefore, abstraction has since then been seen as the perception of pure form, and its expression as purely aesthetic.
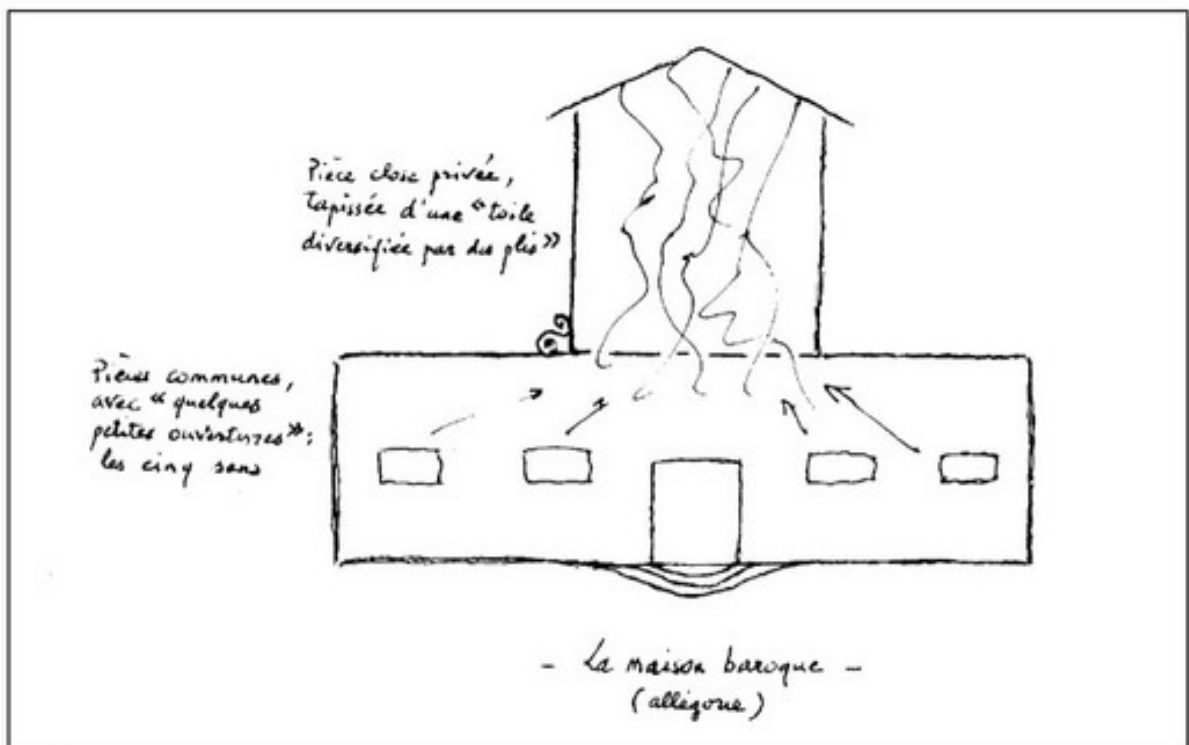
Figure 136. Gilles Deleuze, La Maison Baroque, drawing in pencil in Gilles Deleuze, The Fold (1993).

Drawing abstraction in architecture

Beyond aesthetics, however, abstraction remains a cognitive process that allows the selective import of information and its refined expression that follows a series of principles. In the visual arts this is

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[18] Roy R Behrens, "Art, Design and Gestalt Theory", *Leonardo* 31, no. 4 (August 1998): 299–303, https://doi.org/10.2307/1576669.
[19] Dan Pan, "Primitivism in Art,", 114.
[20] Konrad Fiedler, *Schriften Über Kunst* (Köln: DuMont, 1996).
[21] Roy R Behrens, 'Art, Design and Gestalt Theory'.

fairly clear in the broad array of abstract approaches, from "mimetic" to "schematic" representation. These opposing forms of abstract expression are bound by the principles that enable this process to take place and which are accurately described as "devices" in Robert W. Witkin's 1983 paper "The Psychology of Abstraction and the Visual Arts".[22] In the examples explored in this chapter it will be suggested that architecture makes use of several such devices and implements abstraction in a variety of degrees and interpretations. Here, this is divided into two distinct categories of abstraction in architecture. One of these is its implementation as a working process to develop architectural projects, often entailing conceptual notions such as "space-time" and conceptual approaches including architectural drawing as a method of abstraction; the other is the formulation of abstraction as a physical architectural quality that leads to spaces that can be described as "abstract". While the former appears in various forms and times as an essential mental process in developing architectural notions, the latter is seen to gain traction during the rise of Modernism and later Postmodernism, which Anthony Vidler describes as a distancing of architecture from the idea of "humanism",[23] in effect abstracting the human body and its experience of space. The abstract mental processes are applied in this case to create "a universalizing abstraction and a psychology of sensation and movement" towards a "higher order of truth", expressing abstract conceptual notions through the elimination of the "excess".[24]

A significant element of architectural practice, the architectural drawing is in itself a cognitive process that has an immediate visual outcome and is, in concept, practice, and output, an exercise of varying degrees of abstraction. In the realm of architecture, the role of drawing takes on an even more layered definition, becoming an expression of a number of such devices. Different drawings for different purposes employ different devices and degrees of abstraction, resulting in a broad and distinct range, from conceptual sketches to renders, architectural technical drawings and diagrams. A rough conceptual sketch that is meant to portray form and elements will be equally abstract, yet in a very different manner, from that of an architectural plan that first and foremost uses symbolism to communicate similar ideas. For Vidler, this abstraction is a means of representing imagination and communicating these imaginings, and despite their variance in means and methods they all share a common denominator: the diagram.[25] The diagram covers various domains of background, process, and intent; however, it effectively encapsulates the essence of abstraction in its combination of concept and expression. The abstraction of the diagram, and similarly of the drawing, positions it in a

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[22] Robert W. Witkin, 'The Psychology of Abstraction and the Visual Arts', *Leonardo* 16, no. 3 (August 1983): 200–200, https://doi.org/10.2307/1574914.

[23] Vidler distinguishes three approaches in architecture's consideration of the human body which are expanded upon in the previous chapter, Architecture of Absence, and which are based on his paper. "The Building in Pain: The Body and Architecture in Post-Modern Culture". *AA Files*, no. 19 (1990): 3–10.

[24] Vidler, Anthony. 'The Building in Pain: The Body and Architecture in Post-Modern Culture'. *AA Files*, no. 19 (1990): 3–10, 6.

[25] Anthony Vidler, 'Diagrams of Diagrams: Architectural Abstraction and Modern Representation', *Representations* 72 (2000): 1–20.

state of indefiniteness. Vidler relates it to "an instrument of and for utopia" and describes it as a device that "points" towards something while not being something itself.[26] As he notes, there is a natural similarity between diagram and drawing and at the same time a crucial distinction: they both make use of various abstract devices, but they differ greatly in their relation to reality and origin. As far as the diagram is concerned it is not defined by either, and therefore it may attain a utopic quality.[27] By this comparison the diagram becomes a symbol for the ideal, a representation of reasoning that is neither *real* nor a *copy* and thus constitutes a utopic idea that might "instruct" in the formulation of a drawing, for example, but will never itself be realised.

The diagram, as Vidler eloquently describes, is an essential part of modern architecture and continues to present possibilities of further development as a mechanism of thought and creation. In terms of Witkin's description of "devices", the diagram employs several, in each case being combinations that result in distinct diagrammatic styles. Vidler recognises several such applications in contemporary architecture: for instance, Frank Gehry's "ecstatic expressionism", Ben van Berkel and Winy Maas's "topographical and regionalist mapping", Hani Raschid's "deconstructionist work" and many more other approaches that utilise digital and computational technologies in combination with diagrammatic approaches as forms of architectural process.[28] These methodologies, derivatives of their own distinct thought processes and approaches to the architectural concept, are the expression of various levels and combinations of abstraction. All of these, as is so often mentioned in Vidler's paper, derive from Modernism and its later iterations, positioning abstraction as an integral part of architectural Modernist thought and demonstrating a gradual advancement of abstraction as a conceptual process alongside architectural developments. However, the abstraction found in the architectural process should not be conflated with its outcome as being abstract architecture, as seen in the above example, yet these can be mutually inclusive in certain circumstances, as seen later on.

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[26] Anthony Vidler, 'Diagrams of Utopia', *Daidalos* 74 (2000): 6–13.

[27] Charles Sanders Peirce relates the diagram to "a pure dream": Peirce, Charles Sanders. *Collected Papers of Charles Sanders Peirce, Volumes III and IV: Exact Logic (Published Papers) and The Simplest Mathematics*. Edited by Charles Hartshorne and Paul Weiss. Vol. 3 and 4. (Cambridge, MA: Belknap Press of Harvard University Press, 1933), 362, 531.

[28] Vidler, 'Diagrams of Diagrams'.
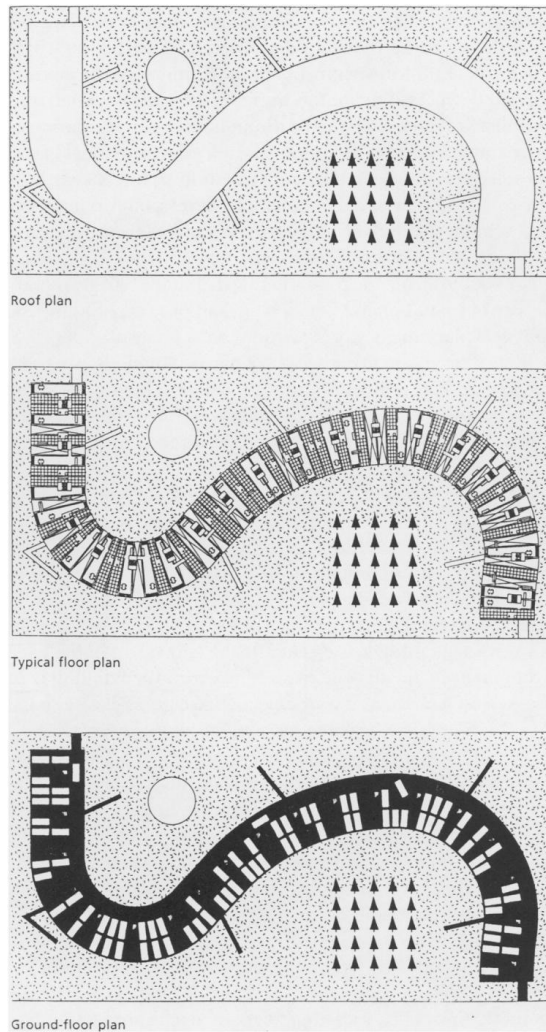
Figure 137. Kazuyo Sejima, Project for Middle Rise Housing Prototypes, 1995. Plan drawings, Assemblage 30 (August 1996).

One such example occurred in 1996, when Toyo Ito found that architecture and diagram manage to breach their boundaries in Kazuyo Sejima's work, and by coining the term "diagram architecture" he proposed an architecture that is a diagram and a diagram that manages to become a building.[29] Ito mentions: "you see a building as essentially the equivalent of the kind of spatial diagram used to describe the daily activities for which the building is intended in abstract form", thus identifying a process that allows abstraction to attain architectural presence and form through the building's embodiment of the diagram. While Ito intended to refer this in diagrammatic architecture to a symbolic linearity of elements and forms in Seijima's architecture, moving from the diagrammatic drawing to a diagrammatic physical interpretation of space, it will later on be suggested that Sejima and her partner Ryue Nishizawa, in the work of their architectural practice SANAA, did not rest solely on this architectural interpretation of the diagram but continued to explore abstraction beyond

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[29] Vidler, 'Diagrams of Utopia' and Anthony Vidler. 'Architecture's Expanded Field'. In *Architecture Between Spectacle and Use*, (Williamstown, Mass.: Sterling and Francine Clark Art Institute, 2008), 143–54..

linearity and form. Until now, diagram and abstraction constituted an approach that was only a part of architectural practice, limited to its conceptual thought process. At this point, however, with the term "diagrammatic architecture", abstraction in architecture found a very clearly defined interpretation that combined Arnheim's levels of abstraction and Witkin's employment of devices through a gradual process that can usefully be compared with abstract art gaining a visual expression that is clearly architectural.

This diagrammatic architecture, however, is not "new". The minimalism and clarity of transference between diagram and space that Sejima's work portrays are the result of years of architectural process. And although Eisenman, in his *Diagram Diaries*[30] claims that he invented the diagram, the emergence of the diagram in the 1980s and 1990s is only a re-emergence, similar to the re-emergence that "type" has been experiencing throughout architectural history. It would be greatly remiss, then, to position the development of "diagrammatic architecture" in the 1990s, as it would then imply that abstraction in architecture originated in 1920s Modernism. It is, however, in these periods that architectural projects demonstrate the most marked interest in this subject and its promotion, and abstraction in architecture shows significant development in Modernist explorations.

Modern abstraction in architecture

Anthony Vidler and Pier Vittorio Aureli found in Modernist architecture an opportunity to analyse the relationship between the diagram and abstraction.[31] Abstraction was an idea already embedded in cognitive and expressive processes long before the modern period, but it gained prominence during a time when ideas and perspectives were being questioned anew, in analysing fundamental concepts of the human being in their surroundings, especially between the 1900s and the 1950s. The timeliness of the emergence of Abstract art and Modern architecture is not a coincidence and the influence of the first on the second can be found throughout twentieth-century architecture from theory to practice, even in the most literal sense, as in the case of Charles and Ray Eames' Case Study House No. 8. While Abstract art became distinctive through the work of various artists, expressive mediums and forms, its principles were also articulated in other artistic movements, such as Cubism and Dadaism; in architecture such notions of abstraction remained less developed and rather unstructured. Although links between these artistic movements and parallel architectural tendencies might be seen to have taken place at that time, as seen in the De Stijl visual architectural formulation in the Eames house, the "Abstract" did not transfer from the arts to architecture in quite the same way. One reason might

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[30] Peter Eisenman, *Diagram Diaries* (New York: Universe, 1999).
[31] Pier Vittorio Aureli, 'Intangible and Concrete: Notes on Architecture and Abstraction', *E-Flux* 64 (2015), and Pier Vittorio Aureli, 'The Dom-Ino Problem: Questioning the Architecture of Domestic Space', *Log*, no. 30 (September 2014): 153–68.

have been that there seems to have been a certain amount of experimentation and investigation taking place in the arts regarding the notion of abstraction. This freedom of expression found in the arts tended to be more limited and constrained in the more pragmatic world of construction. As such, the scale of interest in abstraction found in the arts was not met with the same vigour in architecture, instead encountering issues of purpose, function and identity regarding the role of this form of abstract architecture. That is not to say that abstraction has been disregarded in architecture. On the contrary, it has been central in the development of modern – and, most evidently, Modernist – architecture and has taken several different forms. For example, its gradual implementation through a *figural abstraction* expressed by distancing itself from ornamentation, beginning with Siegfried Kracauer's analytical critique of ornamentation,[32] Loos' rejection of it as a crime,[33] and Le Corbusier's reification of the latter's decree, cannot be disregarded.[34] However, the depth of abstract development seen previously in architectural drawings does not translate in the same manner in the entirety of the architectural construct, and this can be seen in the examples of the Maison Dom-Ino and the Farnsworth House.
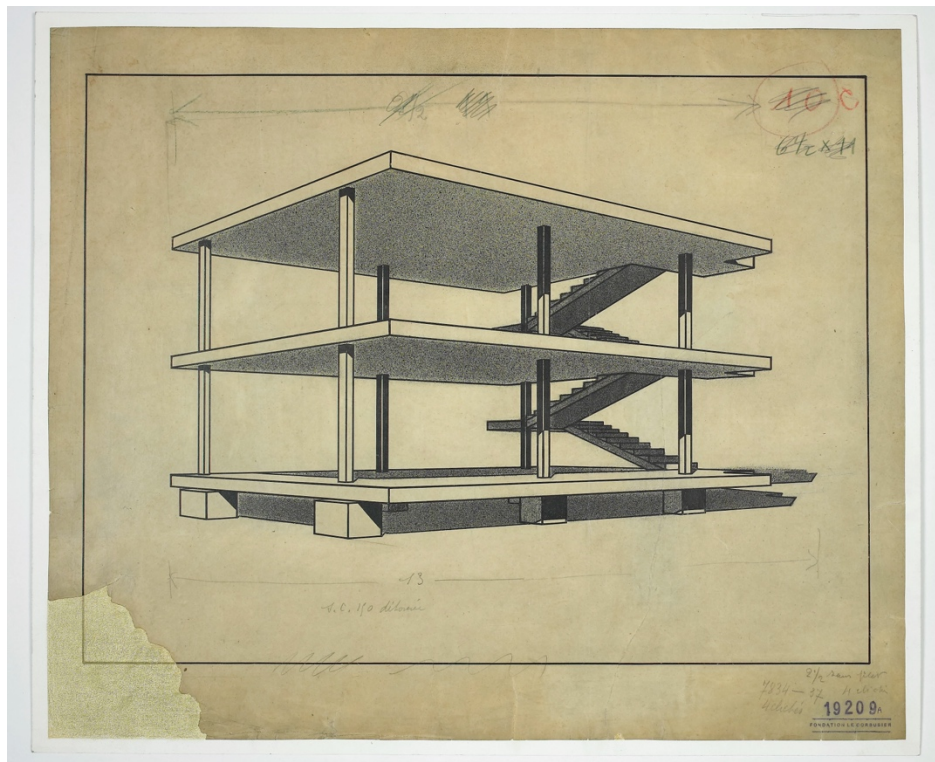
Figure 138. Perspective view of the Dom-ino system, 1914. © Fondation Le Corbusier. All rights reserved.

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[32] Siegfried Kracauer and Thomas Y. Levin, *The Mass Ornament* [1963] (Cambridge, MA: Harvard University Press, 1995).

[33] Adolf Loos, 'Ornament and Crime' [1913], in *Ornament and Crime: Thoughts on Design and Materials* (London: Penguin Books, 2019).

[34] Further expanded upon in Stanislaus von Moos and Margaret Sobiesky, 'Le Corbusier and Loos', *Assemblage*, no. 4 (October 1987): 24–37, and in Henrik Reeh, *Ornaments of the Metropolis: Siegfried Kracauer and Modern Urban Culture* (Cambridge, MA: The MIT Press, 2004).

In Modernism, as well as in other similar styles that derive from it, such as Minimalism, abstraction is expressed as a form of omission, subtraction, and the carefully curated use of the absolute essential elements. Embarking on a rejection of excess, it represents a process of elimination to allow the "true nature" of architecture to emerge. Despite the vagueness associated with abstraction, it was at that point employed as a means to clarify architecture and make it more legible and understandable: this aim is also supported by Otto Wagner's description of the Modern movement.[35] Eisenman portrays the emergence of Modernism as a representation of reduction, a style and approach that negates its own intention, that was to overcome the representational style experienced up to that point through the classical. According to him, abstraction in Modernism was in fact a process of reduction towards "pure functionality" and a form of representing "reality". And indeed, Le Corbusier is seen to utilise this line of thought, attempting to represent the "reality" of the structure by allowing the bones of architecture to be clearly visible in his drawing of Maison Dom-Ino (1914), letting the form, structure, and its use be clearly understood from a single glimpse.

However, the representation of function or structure is not "reality" but, as Eisenman continues to state, "a manifestation of the same fiction wherein meaning, and value reside outside the world of an architecture 'as is' in which representation is about its own meaning rather than being a message of another previous meaning." There is a duality of abstraction taking place in the creation of this drawing. On one hand, there is Le Corbusier's process of thought, abstracting information and drawing an architecture that is basically a diagram of what until then would have been a two-storey house: instead, now the architecture is the diagram. On the other hand, the drawing itself is also an abstraction, a phenomenon that, according to Manfredo Tafuri and Francesco Dal Co, is the indirect creation of a project.[36] It also resonates with the way Aureli presents the abstraction of this project, an abstraction of a conceptual nature that is closely linked to the concrete through its reference to material, construction, and technology. If, as Eisenman supports, Modernism is a failed attempt of architectural abstraction, it is because of its inability to distance itself from the representational nature of architecture. Yet it introduces questions of fiction and reality, revisits the question of representation and still remains in many other ways an exploration of abstraction within an architectural context. This second form of abstraction refers back to the definition of the abstract as a concept that Arnheim explored, and by which all architecture can be considered abstract, a concept that is then being constructed by someone else, and therefore loses its state of abstraction in the process of realisation.

In this light, abstraction might pose the very ontological question of architecture's role and identity. How much of the architectural concept is translated into the physical construction of the

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[35] Otto Wagner, Harry Francis Mallgrave, and The Getty Center for the History of Art and the Humanities, *Modern Architecture. Otto Wagner: A Guidebook for His Students to This Field of Art.* (Chicago: University of Chicago Press, 1988).

[36] Manfredo Tafuri and Francesco Dal Co, *Modern Architecture. Vol. 2* (London: Faber, 1986), 314-324.

architectural space: what is being gained, or lost, in the process, and how much of this abstraction is architectural or otherwise? Aureli's analysis of the Dom-Ino house, following Eisenman's study, expresses the Dom-Ino abstraction as a form of economy that stretches from material and construction to the spheres of society and politics.[37] As such, the Dom-Ino house is seen as a symbol of industrialisation, capitalism, "free plan" dwelling,[38] and so on. It also represents a turning point in architecture and construction that comes with new technological advancements, materials and division of labour that took place at the beginning of the twentieth century.[39] It expresses all the attributes that come with the incorporation of reinforced concrete in the new designs that feature wider spans, larger openings, less support, all assisting the development of a more and more abstract form of architecture. It is a "product of condensed collective experience"[40] that manages to combine all of the above in a clear and visually simple design: the concept is communicated through the simplicity and, yes, the abstraction of the form. The Maison Dom-Ino is a symbol of the exploration of architectural abstraction, an experiment in elimination to reach the essence of this particular architectural prototype. In its original form, the Dom-Ino represents Le Corbusier's early conceptual thoughts that will later be seen to take many different forms of architectural modularity that combine the freedom offered by a certain level of customisation, yet still allowing the construction of large-scale housing projects, which all refer back to the "original" concept of the Dom-Ino. In its realised version, though, it is questionable how much of the abstraction continues.

This issue appears in a 2014 construction of the Maison Dom-Ino at a 1:1 scale to match the sketch.[41] The idea behind this installation was to give form to the Dom-Ino concept and allow the visitor to experience its materiality, its spatial qualities of blank slabs laid one on top of the other, interconnected through a staircase. Yet the concept still lies within its link to the drawing, and seeing the structure in perspective, reminiscent of the drawing, is perhaps one of the strongest experiences of the model. Of course, the Dom-Ino house was never intended to be a bare frame, but an exercise in architectural issues and possibilities, providing a building block with which the architect could generate combinations and variations of housing and other types of complexes. In collaboration with

[37] Pier Vittorio. "The Dom-Ino Problem".

[38] Aureli notes how the plan is absent in the Dom-Ino house and specifies that "the empty frame shown in the project is only an idea". As an idea, a concept, what the Dom-Ino represents is even further abstraction from what is usually seen in architecture, the plan. It is a device which is meant to "receive" plans, other ideas to find further specificity, lessening only slightly its abstraction.

[39] Adrian Forty, *Concrete and Culture: A Material History* (London: Reaktion Books, 2016).

[40] Beatriz Colomina, *Raumplan versus Plan Libre: Adolf Loos [and] Le Corbusier 1919-1930.* Ed. Max Risselada (New York: Rizzoli, 1988), 122.

[41] In 2014, the Architectural Association celebrated the centenary of Le Corbusier's concept by constructing a 1:1 model version of the Maison Dom-Ino by the architect Valentin Bontjes van Beek and students from the Architectural Association. Verghese, Manijeh, and Valentin Bontjes van Beek. "Interview - Building an Unbuilt Icon." *AA Conversations*, 2014. https://conversations.aaschool.ac.uk/building-an-unbuilt-icon/.

his friend Max Dubois, who owned a concrete firm, Le Corbusier aspired to patent this structure and create a housing assembly line. The 2014 "Dom-Ino Effect" symposium at the Architectural Association presented not only several concepts that defined the Dom-Ino house from various perspectives, including social or economic ones; it also presented how, in fact, the Dom-Ino house was adopted in multiple examples around the world, for the very reasons that Le Corbusier designed it as an adaptable and easily to be replicated structure, yet it was often problematic for the residents, the city and even the architectural profession, that could not have been foreseen in its initial concept. In particular, Platon Issaias' take on the Dom-Ino effect in Athens set Le Corbusier's visionary and innovative idea against the harsh realities of planning, construction and financial and political networks. Seeing the effects of the materialisation of this drawing in the various housing complexes that followed this modernist approach results in very specific examples that are ruled by multiple additional factors from the various adaptations of the interior spaces to the residents' requirements for cultural and local additions such as the balcony in the *polykatoikia* (housing block). The abstraction of architecture witnessed in the drawing becomes lost in these projects, becoming defined, specific, obtaining form and with it an identity that is no longer theoretical but clearly representational. In a similar fashion, the construction of the 1:1 model, instead of bringing with it the conceptual identity of the sketch, completely changes in nature and offers an interesting example of the investigation of architectural abstraction. Even though it is not restrained by the factors mentioned previously, it is a far cry from its abstract roots, and this perhaps might be due to the fact that it is a replica, a three-dimensional representation of the image depicted in the drawing and not of the ideas communicated through it. And in this way, it is an exercise, one that tests the structural concept of the Dom-Ino house and places the architectural elements in space, yet the physical construct remains an imitation of the original drawing.

The example of the Dom-Ino house questions whether it is possible to have abstraction in the built aspect of architecture or whether it can only exist in concept. It poses an experiment, in relation to Thales's argument on thought and reality and Deleuze's determination of abstraction. According to Thales, thought is abstract, and in contrast reality is concrete, creating an opposite polarity, whereas Deleuze negates such contradiction and correlates the abstract with "true lived experience".[42] This line of thought might be further explored by another example of abstract architecture, that of the Farnsworth House, by Ludwig Mies van der Rohe: in this case the building represents a project that was realised following the concepts of architectural abstraction from concept to construction and finally habitation, and which represents what could be called an abstract "lived experience" in the Deleuzian term. Unlike the Dom-Ino house's abstraction as a method that produces a "prototype" to be implemented in other projects, the Farnsworth attempts to be an experience of abstraction through

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[42] Brent Adkins, 'Who Thinks Abstractly? Deleuze on Abstraction', *The Journal of Speculative Philosophy* 30, no. 3 (2016): 352–60.

a constructed formulation of its abstract processes, as seen in the various elements of the project, from the drawings to the structure and even in the experience of the space. The Farnsworth project can be analysed as multiple different forms of abstraction. In the Farnsworth drawings the concept of lightness is communicated through the simple lines; the plans express an openness through the wide rectangular planes and minimal structural elements are all arranged on a grid, while the elevations employ only horizontal lines to form the steps, the platforms and the ceiling and vertical lines for the columns, and nothing else. As drawings they closely resemble other movements experimenting with abstraction at the time such as Constructivism or De Stijl,[43] yet their intention is not to create a visual similarity, but to express the spatial abstraction that comes from the design. Also, comparisons have frequently been drawn, notably between Mies van der Rohe himself – and other architects of his time– and De Stijl artists such as Piet Mondrian or Theo van Doesburg.[44] Both approaches explored abstract design from their own perspectives but in architecture there is one additional focus that as has been noted in the example of the Dom-Ino project: poses problems are encountered in translating abstraction to architectural space. Van Doesburg seems to understand the distinctions between the two disciplines and their respective strengths and weaknesses, as he mentions in his text of November 1918.[45]

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[43] In 1936 curator Alfred H. Barr placed Mies's plan for Brick Country House and van Doesburg's *Rhythm of a Russian Dance* side by side, creating a link between Mies's architectural approach and De Stijl that has since become irrevocable. Terence Riley, Barry Bergdoll, and Museum of Modern Art, *Mies in Berlin* (New York: Museum of Modern Art, 2001), 124.

[44] Yve-Alain Bois, 'Mondrian and the Theory of Architecture', *Assemblage*, 4 (1987): 103–30, https://doi.org/10.2307/3171039.

[45] Theo van Doesburg, 'Aanteekeningen over Monumentale Kunst', *De Stijl* 2, no. 1 (November 1918), 10; trans. in Hans L. C. Jaffé, *De Stijl* (London: Thames & Hudson, 1970), 99.

Figure 139. Ludwig Mies van der Rohe, Farnsworth House, Plano Illinois, USA, 1951. View of the entrance from the south façade. Photograph by Jon Miller, Hedrich Blessing, 1985.

The question of "abstract architecture" is seen here to be experimenting within a gradual development from abstract drawings to abstract spaces, and so on. The concept of the Farnsworth House was for its very essence to be "irreducible and universal", to be able to combine the outside with the inside, to be invisible and to be a manifestation of Mies van der Rohe's famous dictum "less is more".[46] Therefore, reducing, omitting, simplifying, and essentially abstracting as much as possible, was a large part of the design process to accomplish these goals. The result, of course, is to be debated, as it has indeed been in several papers and publications to date.[47] The Farnsworth House was

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[46] The quote was regularly mentioned in critiques of the Farnsworth House and mocked as "Less is a bore" as mentioned in Alex Beam, *Broken Glass: Mies van Der Rohe, Edith Farnsworth, and the Fight over a Modernist Masterpiece* (New York: Random House, 2021). The quote, however, dates back to 1855, in Robert Browning's poem "Andrea Del Sarto", and, as Mies van der Rohe mentions, it was a quote he heard from Peter Behrens while working at his office, yet through his work and adoption of its meaning the quote is today most closely associated with Mies van der Rohe. Another quote Mies would often use was "Beauty is the Splendour of Truth" an aphorism that was used by St. Augustine, St. Thomas Aquinas and Plato, and which Mies would use in a similar manner to "less is more" with Truth for him being the concept found through his Modernist approach of Abstraction and Minimalism. Jean-Louis Cohen, *Mies Van Der Rohe* (London: Spon, 1996), 81.

[47] All the sources noted in this section are either for or against the Farnsworth design, on various perspectives, They either question its realism, its outcome or its purpose as an architectural design, or they exemplify its concept, idealism, and role in architectural history. Some manage to balance both by looking into both the idea

designed to bring pleasure and beauty to its occupant and connect them with the surrounding nature, as Lord Peter Palumbo so eloquently describes, in his account of his stay in the house.[48] Through the use of abstraction the architect seems to have attempted to minimise the intervention of architecture to the experience of the surrounding environment, allowing only the essential elements of architecture to enhance the occupants' experience. Other photographs (Fig. 137, 148) of the house seem to attempt to capture this from their point of view looking outwards to the forest, allowing the building to frame the view. In the majority of the photographs, however, the building is captured in a manner that accentuates its structure and lines, positioning it as something alien in the otherwise natural environment. On the other hand, there are the issues of overheating and flooding, that make the house uninhabitable. There are photographs of that as well, showing the building half under water, decaying, an ironic riposte to the idyllic dream that was supposed to remain for years unmarred. And there are the opposing opinions of architects, in this case of Mies's grandson, the architect Dirk Lohan, who sees the project as something that requires a prior understanding, that it is not meant to be functional - as perhaps it should, considering it was intended as a house - but to respond to more "spiritual values".[49]

Figure 140. Dr. Farnsworth with her dog, her house under construction ca. 1949. View of the north face of the house showing the structure which differs little from the end result. National Trust for Historic Preservation archive.

behind the design and its realisation, yet the debate is clearly one that is based on individual perspectives on the values and role of architecture.

[48] Martiz Vandenberg, *Farnsworth House: Mies van Der Rohe* (London: Phaidon, 2003), 25.
[49] Keith Eggener, *American Architectural History: A Contemporary Reader* (London: Routledge, 2006), 317.

Figure 141. View of Farnsworth House, screened porch looking northwest, ca. 1955. Farnsworth House Archives.

Figure 142. View of the Farnsworth House during flooding. National Trust for Historic Preservation.

Nevertheless, the Farnsworth House is considered to be an epitome of Minimalism and an expression of the Modern values of architecture, becoming in itself a work of art. And herein lies the question posed by the Dom-Ino house as well. The Farnsworth House was designed to be a house, to be occupied and provide the necessities that come with such architectural spaces. However, due to the

various issues it faced it was not a place that could be occupied for too long, and it was expensive to maintain, as Palumbo (whose primary residence was in London) mentions.[50] So instead, the Farnsworth house has become an icon, an objet d'art to be sold and collected, as it was in 2003 by Sotheby's auction house, for $7.5 million. Historian Irene Sunwoo explores this event and notes in relation to this that the issue demonstrates that architecture can be treated as an art object, accompanied by a catalogue, photographs and other material that assist in its objectification[51] and auctioned like a painting or a sculpture. She writes, "This inflation of the house as a product of labor, an artefact of cultural and historical value, and an object esteemed by architects, eclipsed its status as a dwelling, projecting an alternate identity as a prized commodity whose value is finally articulated by the price tag": it is transformed into a "historical artefact" whose value resides in its history rather than its architecture. This relegation from being a dwelling to becoming an artefact poses an interesting question in relation to the architectural identity of buildings and it foregrounds, in this particular investigation, the question of whether abstraction has had any role in augmenting this identity crisis.

Figure 143. Hiroshi Sugimoto, Farnsworth House, 2001, gelatin silver print, 49 x 60 cm.

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[50] Alex Beam, Broken Glass: Mies van Der Rohe, Edith Farnsworth, and the Fight over a Modernist Masterpiece (New York: Random House, 2021), 260-304.
[51] Irene Sunwoo, 'Taming the Farnsworth House', *Thresholds*, 31 (2006): 66–75.

Abstraction in photography

It could be argued that the cause of this particular objectification of an architectural landscape - for it is not only the structure that is part of the architectural design but the land surrounding it as well - might be because in this case abstraction has gone too far: the process of abstracting architecture from the design leaves behind a sculpture, an artefact, rather than something of the complex nature that defines architectural space. This issue became a critical subject in photography, with artist photographers implementing their own artistic explorations of abstractions addressing this form of "abstract architecture". The work of Mies, as it happens, has been played this role in two particular projects, one being Hiroshi Sugimoto's project *Architecture* and the second being Thomas Ruff's *l.m.v.d.r.* In the first case, the Farnsworth House becomes the subject of one specific photograph, *Farnsworth House* (2001), from a broader series focused on Modernist architecture and investigations of the abstract,[52] while in the second the architectural work of Mies is reviewed and reconceptualised through a series that explores several of his projects. In both of these instances photography succeeds in showing another aspect of architectural abstraction, and in its process presents perspectives of abstraction that question the architectural approach and foreground both conceptual and practical issues in its application.

Hiroshi Sugimoto[53] is a Japanese photographer who is well known for his distinctive approach to photography and architecture. His interest in these subjects have created works such as the *Theaters* series, that offer a very definitive expression of abstract notions such as time, light, and space. The analytical and methodological approach in his practice and his employment of photography as an expressive and investigative method has many things in common with the Düsseldorf School of Photography. As a result, works by Sugimoto are often placed side by side with work by photographers of the Düsseldorf School: Michael Fried's *Why Photography Matters as Never Before* is an example of a critical approach to contemporary photography that discerns an element uniting the approach of these artists.[54] Time is a central element in Sugimoto's work and the camera

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[52] Hiroshi Sugimoto, Matsumoto Takaaki, *Hiroshi Sugimoto: Architecture* (Bologna: Damiani, 2019).

[53] A Japanese photographer born in 1948 in Tokyo, Japan, who studied art and photography in the United States, his work is featured internationally. Key works include; Hiroshi Sugimoto, *Seascapes* (Bologna: Damiani, 2015), Hiroshi Sugimoto, *Theaters* (Bologna: Damiani, 2016), and Hiroshi Sugimoto, *Sugimoto: In Praise of Shadows* (Kyoto: CCA Kitakyusho and Korinsha Press, 1998). His interest in architecture has also led to the establishment of the architectural firm New Material Research Laboratory in Tokyo, together with architect Sakakida Tomoyuki. Hiroshi Sugimoto and Tomoyuki Sakakida, *Old Is New: Architectural Works by New Material Research Laboratory* (Zurich: Lars Müller Publ., 2021).

[54] "Envisioning Buildings: Reflecting Architecture in Contemporary Art Photography" at MAK gallery in Vienna, Austria (28 January–22 April 2012) showcased the work of 28 contemporary artists working on the subject of architecture including Hiroshi Sugimoto, Candida Höfer, Thomas Ruff, and Andreas Gursky. Their work is often mentioned in addition to Michael Fried's in Sarah Greenough et al., *Photography Reinvented: The Collection of Robert E. Meyerhoff and Rheda Becker* (Washington, D.C.: Princeton University Press, 2016) and in Gloria Moure, *Architecture without Shadow* (Barcelona: Ediciones Poligrafa, 2000).

provides him with a medium in which he uses his proficiency to create images that delve deep into the nature of notions such as this. Additionally, there is a strong poetic element that emerges in his photographs, one that is present throughout his output but is expressed most distinctly in his series *In Praise of Shadows*, based on the writing of Junichiro Tanizaki,[55] where, again, time, light and space interweave to bring forward a visual expression of thoughts and sentiments. As part of these investigations, a commission from the Museum of Contemporary Art in Los Angeles in 1997 resulted in a series by Sugimoto that was solely focused on the investigation of international Modernist architecture. Sugimoto visited numerous sites of iconic Modernist buildings and applied his distinctive photographic approach by experimenting with the camera's technological capacity to see anew historically significant examples of architecture. In "Architecture after Photography",[56] Therese Lichtenstein compares one of these photographs of the Seagram building by Mies van der Rohe to an earlier photograph captured by Ezra Stoller. Having been photographed in 1997 and 1958 respectively Lichtenstein notes the differences that come with time observed in the different photographs by Stoller in 1958 and Sugimoto in 1997: the original, with its distinct form and iconic vision, emphasising the Modernist concept of new technological achievement, while the later one being more of a "meditation", questioning the history and future of the setting.[57] There is another comparison, however, in the same publication, that shows Sugimoto's deeper intentions towards architecture. It is between two photographs of the Rockefeller centre in New York, one taken by Sugimoto in 2001 and another by Samuel H. Gottscho in 1933. Unlike the previous example, the similarities in the photographs do not show evidence of any significant changes with time, beyond the fact that since Gottscho's photograph was taken shortly after the building's completion it still manages to retain its air of wonder unchanged. Like Gottscho's photograph, Sugimoto's is taken at night, from the same angle, and frames the building in a similar portrait view. The only main difference in the later photograph is that while Gottscho's photograph is focused to show the details of the scene, Sugimoto's lens is out of focus, resulting in a blurred depiction. Nevertheless, the scene is easily identifiable, especially with previous knowledge of the building, yet it manages, through this blurring effect, to question how and why such an identification is possible and what the intention of this architectural design is. The abstraction that ensues through the blurring of the photograph acts instead as a clarifying lens that allows the viewer to see beyond the physical and think about the concept behind it. In this case, it helps to communicate not what the Art Deco elements resemble or what a skyscraper is, but what they are conveying.

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[55] Junichiro Tanizaki, *In Praise of Shadows* [1933] (New York: Vintage Publishing, 2001).
[56] Therese Lichtenstein, *Image Building: How Photography Transforms Architecture* (New York: Parrish Art Museum, 2018).

[57] Ibid.

Figure 144. Left: Ezra Stoller, " Seagram building at night, Mies van der Rohe with Philip Johnson, New York, NY," 1958, gelatin silver print, 44.5 x 31.1 cm. Right: Hiroshi Sugimoto, "Seagram Building –Ludwig Mies Van Der Rohe", 1997, gelatin silver print, 58.42 x 47 cm.

Figure 145. Left: Samuel H. Gottscho, "New York City views, RCA Building floodlighted," 1933, gelatin silver print, 17.78 x 12.7 cm. Right: Hiroshi Sugimoto, "Rockefeller Center," 2001, gelatin silver print, 50.8 x 61 cm.

In a similar fashion Sugimoto's photograph of the Farnsworth House, despite being a blurred and obscure rendition, still manages to convey its nature with complete clarity. The horizontal and vertical lines of its structure show through like the negative version of a drawing while the intense contrast between the white of the building and the grey of its surroundings give the building the feel of a maquette. The lightness of structure and the dreaminess of its existence as a white utopic architectural entity amidst the landscaped surroundings are there, giving the photograph a distinct picturesque ambience that is not seen in other photographs in the series. These elements exist here due to the particular subject, and as such appear as a result of its abstractive method. At the same time, it becomes clear how and why this project has been defined as an artefact. The photograph's composition and contrast magnify its objectification; here is the Farnsworth House, an idea of architectural Modernism. What its interiors are like, the spatial qualities of traversing the building, its connection to the outside, and so on are all concepts that are secondary to the predominance of its design as a light and minimalist structure of architectural abstraction, and while they might be explored through other means and in other photographs of the building, this photograph communicates Mies's quintessential concept, along with the ensuing mishap of transforming an architectural space into an artefact.

Figure 146. Thomas Ruff, d.p.b.02 (from the l.m.v.d.r. series), 2000/2004, chromogenic print, 149,5 x 246 cm.

Figure 147. Thomas Ruff, d.p.b.08 (from the l.m.v.d.r. series), 2000/2004, chromogenic print, 30.5 x 41.9 cm.

Another kind of analysis of Mies' work appears through the camera again, this time in the late 1990s. Thomas Ruff, an artist photographer who was part of the first generation of the Düsseldorf School of photography, produced a collection of photographs of Mies's buildings titled *l.m.v.d.r*. This collection was part of a larger series which the artist considered as creating "pictures of pictures". Ruff's work is based on the concept that what is being seen in real life is a picture, and the camera is a picture-making device that creates an image that is already there.[58] Following this, his photography is a series of experiments, a series of photographs repeated in order to achieve a reliable result, similar in manner to a scientific experiment. Therefore, the subject of the photograph does not lie in the single image but in the series as a whole, something that is also reminiscent of his tutors, Bernd and Hilla Becher's work and their own serial investigations. In keeping with this "scientific" methodology his work is often regarded as having a rather objective approach that is continuously explored to allow for different perspectives yet without straying too far away from New Objectivity principles. Ruff achieves this by adopting an archival methodology and creating "families" of photographs exploring groups of subjects such as portraits, interiors, houses, and so on. In 1991 architects Herzog & de Meuron commissioned him to portray their buildings for the Venice Architecture Biennale which led to the beginning of a series of architectural photographic projects leading to the 1999-2001 *l.m.v.d.r.*,

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[58] Dan Adler, 'The Apparatus: On the Photography of Thomas Ruff', *Art Journal* 75, no. 2 (April 2016), https://doi.org/10.1080/00043249.2016.1202638.

series, a project commissioned by curator Julian Heynen and also included by curator Terence Riley in the New York Museum of Modern Art's subsequent exhibition Mies in Berlin.[59]

Figure 148. Thomas Ruff, h.l.k.01 (from the l.m.v.d.r. series), 2000/2004, chromogenic print, 130 x 185 cm.

The collection comprises 37 photographs of various Mies van der Rohe projects from the late 1920s and early 1930s that are still in existence, including Haus Riehl in Potsdam, Haus Lange in Krefeld, and the Barcelona Pavilion, among others. Each of these photographs are titled in the same way as the main title of the collection, using the initials of the name, a number, and a year. Using various photomanipulation techniques Ruff attempts to give the projects a personal twist, changing the colours, blurring their lines, challenging the viewer to see the projects with a somewhat fresh perspective. On this occasion photography applies a very different abstract analysis to the architectural work, although there are the instances of blurriness, such as in the case of the Barcelona Pavilion. The blur applied on this project is not a focus blur, as seen in Sugimoto's work, but resembles more closely a motion blur, the perspectival distortion created when looking at a scene while the viewer is in a moving vehicle passing by it at a speed. As both a practice and an enquiry, it brings to mind the work of Edward Ruscha, who was also looking at the changing landscape as a result of the automobile a few years prior. What is created in the Barcelona Pavilion photograph is a

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[59] Ronald Jones, '1000 Words: Thomas Ruff', *Artforum* 39, no. 10 (2001).

deconstruction of the building where, due to the design itself, the horizontal planes seem to float in space, giving the impression they are actively moving.

Figure 149. Thomas Ruff, h.t.b.08 (from the l.m.v.d.r. series), 2000/2004, chromogenic print, 131 x 197.5 cm.
© Thomas Ruff. All rights reserved.

Ruff does not retain a consistent approach in his manipulations of the *l.m.v.d.r.* photographs but instead uses various types of photomontage techniques, including the motion blur seen in the Barcelona Pavilion photograph, stereography, as seen in the interior photographs of Haus Lange, overlaying multiple images in the Villa Tugendhat, and colour manipulations that are seen in these and other photographs in the collection. By using this approach Ruff presents a sense of "speed", commenting on Modernism's association with a fast-paced architecture,[60] as well as distancing is practice from the "literal" to explore concepts of perception and memory. He experiments with the perception of the subject in different situations, combining his own photographic sensibilities and the conceptual approaches of the projects, including his own photography, and in some cases using existing photographs and photographically manipulating them into his own authorship, as in the case of the Barcelona Pavilion image. Historian Martin Søberg acknowledges in this "figurative representation" of architecture a correlation to Deleuze's definition of the diagram, a visual

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[60] Ronald Jones, 'A Thousand Words: Thomas Ruff Talks about "L.M.V.D.R."', *Artforum International,* 22 June 2001.

representation of the abstract. [61] Further, he distinguishes a connection to the photographic photomontage which can be seen to refer to Mies' methods[62] of architectural rendering, its role in controlling the narrative, and its consideration as architectural work.[63] In every architectural project the different photomanipulation techniques that are applied might be understood as a measure taken to allow the conceptual aspect of the project to surface, whether this is the structural horizontality of the Barcelona Pavilion or the flatness of the Krefeld villa. Thomas Ruff's abstract view of Mies' work uncovers conceptual layers of the architect's design that are easily overlooked. These emerge in each case through the distinct identity of the project which, despite the artist's interventions, remains sufficiently recognisable. Unfortunately, the Farnsworth House is not amongst these projects, but the similarities shared between it and the Barcelona Pavilion, amongst which is also their identity as an artefact, do not appear to have as strong a presence in Ruff's interpretations. Instead, the pavilion appears to be part of the landscape and moves with it, its temporal nature being something understood through its historical account rather than its design. The movement, blur, and the overall haziness of its being, translates its architecture even more towards its concept than its physical presence. This further removes the definition of "artefact" or "object" from the architecture and allows the understanding of architecture as a notion and a combination of ideas and intentions to come forward. This unique combination of concepts is what enables the building to be recognised as the Barcelona Pavilion, regardless of the angle from which it is being photographed. As Søberg notes, borrowing from Gilles Deleuze and Félix Guattari, through this photography, architecture is "de- and reterritorialised" whereby photography acts as an "abstract machine" to rethink and expose architectural concepts and values.

Placing the two Mies works by Sugimoto and Ruff side by side, their fundamental distinctions become quite clear, presenting a wealth of different ways of seeing as well as contradictions in what they discern as key subjects through their abstractions. Despite their similar photomanipulation techniques and photographic subjects their results could not be more different. The critiques of abstraction that result in insufficiency of information, an object-centred architecture and superficiality can also become a deeper investigation, an unearthing of fundamental concepts that are not immediately visible or understood and a shift in the perception of what constitutes architecture. Through these photographic projects an architect's concept can continue to be re-evaluated and develop, whether within its Modernist principles or as a distinct architectural expression. Therefore,

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[61] Martin Søberg, 'Theorizing the Image of Architecture, Thomas Ruff's Photographs of the Buildings of Mies van Der Rohe' Transcript of *Architectural Inquiries Conference*, Göteborg, 2008 https://americansuburbx.com/wp-content/uploads/2012/09/Soeberg_Theorizing-the-Image-of-Architecture.pdf.
[62] And most notably seen by both Le Corbusier and Frank Lloyd Wright in Chapter II. ii) "From Photography and Architecture to Photography in Architecture" in their use of visual media to promote their architecture.
[63] Andres Lepik, 'Mies and Photomontage, 1910-38', in *Mies in Berlin* (New York: Museum of Modern Art, 2001), 324–29, and Terence Riley, 'Making History: Mies van Der Rohe and the Museum of Modern Art', in *Mies in Berlin* (New York: Museum of Modern Art, 2001), 10–23.

abstraction in architecture is perhaps not a process of elimination but could simply be an exercise in refocusing one's perception, borrowing again from Sødeberg: "the abstract machine is rather something which contributes to instances of creation and potential, which is why its functioning should not be understood as a process of design related to the articulation or distribution of form and meaning." While this is already understood and practised in the arts, in architecture, where the process of design appears to be the main driver for its principles, it is a difficult concept to apply. Instead, when the focus of abstraction turns towards what it represents, its application in producing a form of abstract architecture is met with more constructive results. This appears to be the case when abstraction as a process is first undertaken through photography and adopted and expressed through architecture.

Abstraction in photography, though, is not a term, or even a process, that carries on from painting and sculpture in as natural a trajectory as one would initially assume. On some occasions definitions are borrowed, as with the use of the *tableau* format, yet due to its unique background photography appears to require its own rules and definitions. Such is the case during the exhibition "In and Out of Focus: A Survey of Today's Photography" at MoMA New York in 1948, a conceptual take on photography during the early photographic explorations in abstraction. Curated by Edward Steichen,[64] the exhibition was a presentation of current photographic visions, "ranging from precise realism to completely abstract designs".[65]

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[64] Steichen was a photographer himself: his work often appeared in Alfred Stieglitz's magazine *Camera Works*. His work was also known through its use in advertisements, where he would often experiment with abstraction, and after being enlisted in the US Air Force his approach began to include aerial photography, taking an even further abstract turn. Patricia A. Johnston, *Real Fantasies: Edward Steichen's Advertising Photography* (Berkeley, CA: University of California Press, 1997).
[65] From the exhibition press release, MoMA Archive.

Figure 150. In and Out of Focus: A Survey of Today's Photography. Photograph by Soichi Sunami. MoMA photographic archive.

Amongst many of the well-known and lesser-known artists there were photographs that were greatly reminiscent of Abstract art seen in the early 1900s, portraying geometric shapes, uncertain locations or objects, blurry scenes or ones that play with scale, enlarging views not usually encountered or condensing views too large to see as a whole. In this group of photographs abstraction becomes a method of creating non-specificity in order to provoke thinking. It resembles the process behind Abstract painting where perception is the key to "seeing" the image in the photograph. Among these examples is a photograph by Andreas Feininger depicting a smoky view of Manhattan. The photograph is a hazy view of the metropolis with the buildings in stark relief against a grey and equally overcast background. The light coming from behind the skyline leaves the buildings in silhouette while the smoke from the chimneys adds to the blurriness of their outlines and definition. The result is a graphic layered silhouette of the urban skyline, more a symbolic effect than a documentation of the landscape. The skyscrapers of the urban American landscape become a symbol of the "glorious" years of industry, consumerism and the modern lifestyle.[66] This is reminiscent of the more recent photographs by Hiroshi Sugimoto in his series "Architecture" that he produced in the late 1990s following similar intentions. In this work, Sugimoto captured distinct architectural works that, in their own way, defined architectural modernism. Unlike Feininger, Sugimoto employs the camera's focus to blur his subjects in an attempt to "melt them away" and allow their "soul" to be revealed, focusing on them individually in an almost typological investigation of iconic modern interpretations. In several instances, such as the photographs of the Empire State Building and the Chrysler Building,

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[66] Andreas Feininger, *New York in the Forties* (Neuauflage: Weingarten, 2004), 182.

the photographer focuses on their distinctive elements, their form, materiality and employment of light, and despite the cropping of the images their identity remains intact, symbols of 1930s New York and of a definition of the Manhattan skyline that continues until today. The Empire State Building is also quite prominent in Feininger's photo, centred in the photograph and in sharp contrast. In both cases the employment of the conditions, smoke in one and focus in the second, direct the viewer to focus on architecture as a symbol of ideas and an element of evoking certain atmospheres that adhere to these ideas.

Figure 151. Andreas Feininger, 42nd Street Seen from Across the Hudson c.1945, gelatin silver print, 34.3 × 40.6 cm. © Estate of Andreas Feininger, Courtesy Bonni Benrubi Gallery, NYC. All rights reserved.

The environment presented in these photographs, either as a landscape or close-ups of the buildings, bring to mind another conceptual reading, that of the ideology of "Manhattanism". This term, introduced in Rem Koolhaas' retrospective manifesto *Delirious New York* (1978) expresses all the various concepts that the architect's encounter which the city evokes: the ecstasy, the density, the apotheosis and the harsh reality of this urban landscape. Feininger's photograph can be considered to be an evocative representation of Koolhaas' encounter with this multifaceted place. Its abstraction that emerges from its blurred details, as well as the crisp outlines of the buildings, anonymous at first from

lack of detail yet identifiable from their unique forms, transform the landscape into an architectural landscape of ideas. Aldo Rossi's drawings depicted the urban landscape in a similar fashion, with buildings and objects offering representations of ideas and theories, layered to create a view of a city, and at the same time Koolhaas recreates this in his manifesto and through Madelon Vriesendorp's drawings, where buildings, as well as being icons, also acquire personalities and identities. Following what was seen earlier in Thomas Ruff's photographs of Mies van der Rohe's projects, photography's abstraction of architecture through the blurring of the image seems to bring forward the ideas that are inherently linked to the architecture, either from its conception or through its history. It emphasises the links between Modernism, form and identity as evidenced in Sugimoto's photographs and perhaps also raises a number of issues relating to the spatiality of architecture versus its image.

The photographic exploration of what is considered architectural abstraction may here take the form of a very specific investigation which yet requires a clearer definition of what comprises abstraction in architecture, photography and the various nuances it takes. The 1948 exhibition was only one of several earlier exhibitions that had looked into abstract photography in an attempt to frame it, and was followed by two more exhibitions curated by Steichen: "Colour Photography" in 1950 and "Abstraction in Photography" in 1951. Showcasing many artists experimenting with abstractive approaches such as Ansel Adams, Walker Evans, Isamu Noguchi, and Laszlo Moholy-Nagy it also followed a previous exhibition which was held at the end of the Korean war with the intention of contrasting the reality of the war to the "reality" of photographic abstraction. This is similar to the two opposing photographic approaches in post-war Germany: the re-emergence of a New Objectivity approach by Bernd and Hilla Becher and the emergence of Subjective photography by Otto Steinert, whose movement was in fact represented at the 1948 exhibition by Harry Callahan and Aaron Siskind. As seen from these exhibitions and projects, the non-specific definition of abstract photography also allows various kinds of experimentation on the subject that, unrestrained from precedents and interpretations, allows artists to explore and produce works of significant value to architectural investigations. Steichen's comments on the 1948 exhibition further support this exploratory take on abstraction which he describes as a "convenient handle" for naming a wide range of such experimentation.[67] He also positions abstraction as the polar opposite of objective photography as a medium of "creative control". In relation to what was seen previously, from using photography to analyse architectural abstraction, the 1948 exhibition presents abstraction as various explorations of ideas and perspectives that do not attempt to limit or conform their abstractive methods to the architectural concept of the subject but allow for other readings to emerge. Considering this, abstraction as implemented in these photographic examples of architecture appears to be a method of editing, of applying abstraction to allow the photograph to express the idea,

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[67] From the exhibition press release, MoMA Archive.

minimising obstructions or distractions from that communication. Abstraction as a notion of reduction is not so much the aim here as a by-product that comes with the process of editing. In a similar fashion, abstraction as it appears in these and the following examples rather takes the form of a curatorial practice that applies Arnheim's "levels" to transform the concrete, in a Hegelian way, to an idea. As such, artists are seen to have taken great leaps in honing their use of abstraction to express non-representational values through their photography. One such example would be the photography of space and time, two values that were explored by Sugimoto, but which have also driven other artists to explore through further abstractive and architectural means.

The abstract through Luisa Lambri's lens

Luisa Lambri, born in 1969 in Como, Italy, is an artist who works with both photography and film and has created several works, the result of research on the concepts of space, time and other abstract notions discussed above.[68] Her photographs are considered to be investigations of architecture, abstraction, and memory and as a broader enquiry into the nature of representation.[69] In her work a method of seriality may be discerned, that is in some way reminiscent of the Bechers' methods but is employed in expressing rather more subjective and phenomenological concepts. Lambri's focus is often subjects such as residential contexts and interiors, presenting work that is on a scale and within a framework that feels personal; she presents a feeling of intimacy through the relationship of architecture and memory, ultimately "transforming [buildings] into living, breathing entities".[70] In an interview with Elias Redstone, Lambri described her approach as a form of "self-portraiture", not so much in the sense of being in the photographs but rather through her interpretation of the spaces she photographs, and the little things portrayed that insinuate her presence.[71] As she mentions, architecture to her is houses and homes, and it has more to do with her relationship within those spaces than with the objective nature of the space. They are the result of a dialogue between her and the architect and her interpretation of, or perspective on, the space that is created from this dialogue. In Lambri's many photographs of architectural works, many of which are Modernist houses, including Mies van der Rohe's Tugendhat Villa in Brno and the Farnsworth House along with other buildings by Alvar Aalto, Le Corbusier and Oscar Niemeyer, one would expect to recognise these spaces in her photographs at least to the same degree as they are identified in the photographs of the photographers mentioned above. On the contrary, Lambri's photographs of Modernist architecture become an altogether different kind of conversation where the artist's abstractive methodology re-territorialises

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[68] Diego Sileo, Douglas Fogle, and Luisa Lambri, *Luisa Lambri: Autoritratto* (Milano: Cinisello Balsamo, 2021).
[69] Ibid.
[70] Jean Dykstra, 'Breathing Light into Architecture', *Art on Paper* 11, no. 5 (June 2007): 32–33.
[71] Elias Redstone, "Excavating Modernism", in Shooting Space: Architecture in Contemporary Photography (London: Phaidon, 2014).

the subject within an entirely different scope of spatial abstraction, one which is open to interpretation on a more personal and subjective level, "erasing all iconic points of reference. Her photos subvert the architectural syntax of scale, authorship, and mastery to depict instead the artist's own emotional responses to those spaces, according to different moments and moods.".[72] This is seen in her *Untitled (Farnsworth House), 2016* where she uses the building to frame the surrounding landscape, departing from the view of the building usually taken in photographs, that accentuates its form and structure, instead representing it as a series of atmospheres that change gradually with the changing light of day. As such, in relation to the Düsseldorf photographers explored above, and other artists of a similar predisposition to objectivity, Lambri represents a very different kind of approach. Her photographs cannot be mistaken for architectural documentations, but, as has been seen in the work of many of the Düsseldorf photographers, their photographic development sometimes, and more so in recent projects, also developed to express more specific enquiries with a stronger personal position than that which had was previously been taken – Thomas Ruff's *l.m.v.d.r.* photographs are a case in point: his approach is a more distanced evocation of memory.

Figure 152. Left: Luisa Lambri, Untitled (Farnsworth House, #07, left), 2016, fine art pigment print, 70.5 x 59.6 cm. Right: Luisa Lambri, Untitled (Farnsworth House, #09, right), 2016, fine art pigment print, 70.5 x 59.6 cm.

An overview of Lambri's three decade-long project *Autoritratto* (2021) compiles and investigates the various projects and their focus. Within an architectural context Lambri's

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[72] Barbara Casavecchia. Luisa Lambri's "New Works." *Art Agenda Reviews* (March 6 2013).

photography offers many things to consider. Her photographs succeed in focusing on the small elements that define the whole: the shape of a window, the light filtering through, the atmosphere that is created by the action of opening a shutter. Her work is characterised by a strong sense of time and ephemerality, the expression of an experience gained within a space through light which becomes steadfastly linked to that space and moment in time. As noted earlier in Candida Höfer's work, this is also applied here, in addition to suggesting a sense of presence through the depiction of absence that is expressed through Lambri's work as "a post-minimalist fascination with the latent existential potential of empty space".[73] Her unadorned spaces, often empty of furniture or other items, express a minimalism that employs light and architectural surfaces to compose this "sense of space", a "less is more" approach that complements the Modernist subjects she photographs. Light is, in fact, the main element that defines these images, taking all forms, from the light beams that pass through an opening, the shadows cast from objects, transparencies of various degrees that diffuse the light, the colour white that is the protagonist in almost all the photographs. Similar to Höfer's approach, white is never seen as a colour of absence here, but instead as a colour in its own right, giving not only form to the elements that partake in the scene, but additionally providing a sense of time. This relation of the colour white to architecture can be read in multiple ways, especially considering Barbara Klinkhammer's writing on "white" Modernism, which she sums in four points as a myth created by: "1) the conscious creation of the myth of "white" modernism through publications: 2) the glorification of modernism by later generations: 3) the emancipation of architecture from abstract painting: 4) the absence of an aesthetic discussion during the CIAM congress of 1928."[74] In this interpretation, white is used as an element of further abstraction, stripping the elements of identifiable characteristics of material and colour, adopted as an additional measure of dissociation from decorative elements. As Klinkhammer notes, this notion of "white Modernism" transformed later understandings of Modern architecture and its values to a different form of abstraction than was originally intended. David Batchelor's *Chromophobia* (2000) begins with such an account of the use of white as a means to "erase", as an absolute annihilation, leading to a similar misunderstanding of the meaning of Minimalism and the role of white within it.[75] He links the reception for "white", and its continued pursuit, to its Western association with "virtue", "purity" and the divine. The perception of these notions influences both architecture and its relation to the arts, particularly in relation to the aesthetics of the "white cube" gallery,[76] where the space where art is exhibited is painted completely white,

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[73] An analysis by Roy Exley in Roy Exley, 'Sites of Absence', *Contemporary Visual Arts*, 20 (1998): 62–68, contextualised in Kieran Cashell, *Photographic Realism: The Art of Richard Billingham* (London: Bloomsbury Publishing, 2020), 104.

[74] Barbara Klinkhammer, 'Creation of the Myth: "White" Modernism.' In *92nd ACSA Annual Meeting, Archipelagos: Outposts of the Americas,* Miami, 2004 (ACSA, 2004), 429–34.

[75] David Batchelor, *Chromophobia* (London: Reaktion, 2000).

[76] Brian O'Doherty has been critiquing this architectural and design evolution since 1976. His articles for *Artforum* magazine became the publication Brian O'Doherty, *Inside the White Cube: The Ideology of the Gallery Space* (Santa Monica: Lapis Press, 1986).

removing any possible obstructions from the experience of the art exhibited within them. In this way, the white cube gallery becomes a non-space where the artwork is suspended in almost complete abstraction to limit any possible distractions or unwanted associations. Art critic Brian O'Doherty confronts this widely applied phenomenon and poses his own critique of Modernism, art and the level of abstraction that is being imposed on the exhibition and experience of art which he describes as "one of *modernism's fatal diseases*".[77]

Within this context Lambri's work attempts to re-negotiate the colour white and its contemporary perception of Modernism. Her use of white, while initially it might be considered as linked to "white" Modernism, soon transforms into her method of reading space and time. It greatly differs from Batchelor's annihilating "white" that erases, and instead is used as a defining element of both architecture and the abstract notions that compose her photographs. The nuances of different tonalities of white through shadows and shapes provide enough understanding to remove the need for the use of further colours or elements. In fact, in a similar fashion to Höfer's use of light and the colour white, Lambri employs white as a colour and manipulates it, filling the space and drawing it entirely with this one colour (as opposed to Höfer's more embellished spaces). Abstraction, therefore, is a particularly appropriate term to describe Lambri's approach to photographing architectural spaces. In many of her projects this abstraction is seen to be applied in such measure that her photographs become so abstract that they lose any sense of space, turning into "visual sensations",[78] whose seduction overshadows their possible spatial inquiry. Yet these sensations are seen to create spatial qualities that can be re-applied to space.
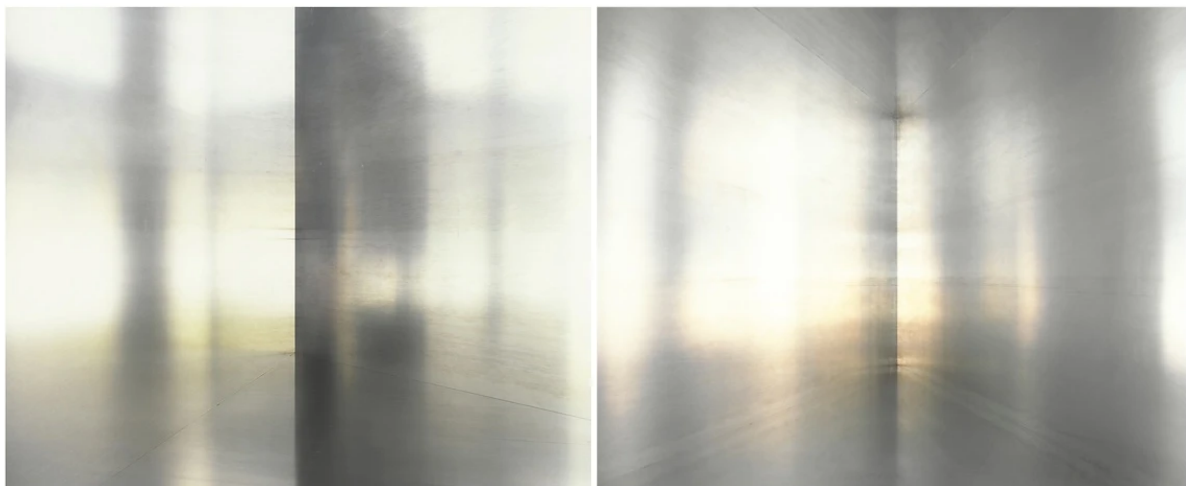
Figure 153. Luisa Lambri, Untitled (100 Untitled Works in Mill Aluminium, 1982-1986, #09, #01, left to right), 2012, chromogenic print, 84.9 x 99 cm. © Luisa Lambri. All rights reserved.

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[77] Ibid., 15.

[78] Sharon Mizota, 'Review: Luisa Lambri, an Artist Looking at Artists, at Marc Foxx', *Los Angeles Times*, October 2012.

Figure 154. Luisa Lambri, Untitled (Sheats-Goldstein House, #14), 2007, chromogenic print, 84.9 x 99 cm.

Figure 155. Luisa Lambri, Untitled (Sheats-Goldstein House, #08), 2007, chromogenic print, 84.9 x 99 cm.

This spatial understanding and expression are equally matched in the work of the architectural practice SANAA and the designs of Kazuyo Sejima and Ryue Nishizawa. In 2010, after ten years of continuous collaboration,[79] Kazuyo Sejima invited Lambri, along with other contemporary artists, to participate in the 12th Architecture Biennale in Venice that she was curating with the theme of "People meet in Architecture".[80] The subject of "meeting" for Sejima, as Brian Hatton mentions, does not have the usual definition of active convergence, instead being "a subtle event, an encounter of subjects, ambience, material and space, act and form."[81] Lambri mentions in an interview that she felt the work of Sejima was that of an artist's and that they both shared an interest in the experience of the space,[82] an in another states that she has found in SANAA's work the ideal subject to explore the abstract concept of architecture.[83] The subject of the Biennale and the SANAA approach express this architectural manifestation of "experience" that becomes realised through a process of abstraction, concepts that show a consistent exploration of refining through various interpretations.[84] Their abstract design becomes distinct in Lambri's architectural photography, perhaps seen more clearly than in other examples of well-known architectural works, creating architectural moments and experiences that are distinctly SANAA's (Fig. 152, 153). Here, Lambri's "visual sensations" of abstraction are seen to transfer to architecture, through the conceptual and design approach of the architects. Transparency and reflection are two of these elements that the work of both the architects and the artist share and are often seen to hold a central role in their work. Lambri's *Untitled (100 Untitled Works in Mill Aluminum, 1982-1986), 2012* is one such example, in which Lambri photographs the work of Donald Judd. What comes from photographing this installation is an exploration of visual perception using the installation's materiality and the light coming from the space which surrounds it to create spaces that come from within and beyond the object. Similar perceptions are also experienced in other projects such as her *Untitled (Sheats-Goldstein House), 2007,* in which she explores the boundaries between the built and natural environment. The perspectival performances act as exercises to the beholder's perception of space and being, challenging them to see differently what is considered to be a static space and their relation to it. In a

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[79] Lambri moved to Japan in 2000 as part of an artists-in-residence programme at the Centre for Contemporary Art Kitakyushu, during which time she began to learn about SANAA's work, and in particular Sejima's. From an interview in Lucia Tozzi, 'Lambri + Sejima - Just about Colours: A Dialogue between Stefano Mirti and Luisa Lambri about Her Relationship with Architecture and the Artworks on Show at the 12th Venice Biennale.', *Abitare*, 8 July 2010, https://www.abitare.it/en/architecture/2010/07/08/lambri-sejima-2/.

[80] Brian Hatton, 'Meeting, Building . . . Preserving? Venice Biennale 2010', *AA Files*,. 61 (2010): 81–85.

[81] Ibid.

[82] Tozzi, 'Lambri + Sejima - Just about Colours'.

[83] Hans Ulrich Obrist, 'Sanaa on Kanazawa: Roving Curator Hans Ulrich Obrist Catches up with Kazuyo Sejima of Sanaa Architects Group about Kanazawa Museum, Istanbul Bienale, the New Museum in Rome, and Prada Beauty. Images by Luisa Lambri.', *MAKE: The Magazine of Women's Art*, 1 January 2002.

[84] SANAA implements various degrees of transparency and opacity, white colour and reflection, as well as strict, fluid lines, in their various projects ranging from residential projects such as the Shibaura house to public spaces such as the Glass Pavilion at the Toledo Museum of Art.

similar fashion, SANAA's projects act in this way by blending the exterior and the interior and creating a visual experience that transforms architecture into light and immateriality. In their Toledo Art Museum Pavilion, the curved glass panels have this kind of effect, where the visitors are always in direct contact with the outside even though moving within the building's walls. The optical performances created by navigating the space, through its reflections, transparencies and occasional disconnections, keep the visitor in a state of alacrity to see beyond, to move and to experience the way the light shines and reflects on the curvatures.

Figure 156. Luisa Lambri, Untitled (21st Century Museum of Contemporary Art, #02), 2007, laserchrome print, approx. 50 x 70 cm. © Luisa Lambri. All rights reserved.

Figure 157. Luisa Lambri, Untitled (21ˢᵗ Century Museum of Contemporary Art, #03), 2007, laserchrome print, approx. 50 x 70 cm. © Luisa Lambri. All rights reserved.

Architecture of abstraction (Teshima Art Museum)

Figure 158. View of exhibited work (water drops on the floor) by artist Rei Naito at Teshima Museum, 2010. Photograph by Iwan Baan, 2011. © Iwan Baan. All rights reserved.

Throughout their work, SANAA represent an architecture defined by lightness and a lack of boundaries, creating a visual experience through layers and transparencies, mixing the interiors with the exteriors and employing materials that expand on this visual and performative architecture. Eve Blau describes SANAA's design as "curating architecture", seeing a very intentional arrangement of spaces and their effect through their visual and structural representation that produces a curated experience.[85] Through this curation abstraction is seen to be performed in a manner that acts as a non-definitive and entirely minimalist practice of architecture of experience in Ryue Nishizawa's Teshima Art Museum. Completed in 2010, the Teshima Art Museum was designed in collaboration with the artist and sculptor Rei Naito on the island of Teshima, Japan, inviting artists and visitors to experience art in the form of architecture. The building is a concrete shell that stands without columns, allowing the shell to curve uninterrupted within the site. Openings on the surface of the shell follow the same fluid curvature and act as either light wells or passages. Overall, the building seems to emerge organically from the landscape creating an open landscape where the only distinction between interior and exterior is the areas where there is a canopy above the visitors. The white concrete creates a stark

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[85] Eve Blau. "Curating Architecture Within Architecture," *Log* 20 (2010): 18–28.

contrast amidst the dark green landscape, yet its smooth surface diffuses the light and reflects the surrounding trees and overhead occasional clouds. Devoid of any elements other than a circular seating area in one of the smaller "shells", the open empty spaces offer an immediate and uninterrupted experience. It is pure minimalism in its creation of a space that can be experienced through a single curved surface creating architectural elements, such as windows and doors, through its discontinuities. As light passes through the openings, or water, or air, the space transforms every second. Every surface or opening participates in this performance, as it reflects, shadows or allows the viewer, without interruption, to see beyond. As Blau mentions in relation to Seijima's work, which also applies very much to Nishizawa's approach, "curating, in Sejima's hands, plays on the 'ambivalence between something and nothing. . . the floating identity of materials and space,'[86] in interventions that subtly inflect and transform time and space around them, the whole building is the curation and the artwork itself".

Figure 159. Ryue Nishizawa, Teshima Art Museum, 2010. Photograph by Iwan Baan, 2011. © Iwan Baan. All rights reserved.

The concepts of time and space are clearly visible in this project and appear to hold a predominant role in its creation. In one of Lambri's series, *Untitled (Centro Galego de Arte Contemporánea), 2008,* the photographs present a structural intersection (a corner of a wall and the

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[86] Kazuyo Sejima, quoted in Kristin Feireiss ed., *Kazuyo Sejima + Ryue Nishizawa/SANAA: The Zollverein School of Management and Design, Essen, Germany* (Munich, Berlin, London, New York: Prestel, 2006), 54.

floor or a beam that meets the wall), projecting shadows of various intensity, length and angle. Each photograph is taken from the same position, yet they are all different as the light – which one can assume is natural sunlight – changes by the hour. In these photographs Lambri represents the transformational nature of spaces that change in time through light. It also shows how this transformation affects the viewer's perception of the space and invites them to question architecture in regard to it. The Teshima Museum appears to function by this "sundial" method as well: with its curved and unspecific form it has the effect of requiring the visitors to perceptively reposition themselves while taking in the shadows that form the space. For lack of a better definition, the space expresses its form through these shadows, which people working with 3D models refer to as "ambient occlusion". Using this parallelism, the form of the space is not so much defined by the shell structure as it is by the shadows that it creates in relation to the light passing through its openings, giving definition to where the shell meets the ground or its different curvatures and creases.

Figure 160. Luisa Lambri, Untitled (Centro Galego de Art Contemporánea, #08, #02, #12, left to right), 2008, laserchrome print, 74.9 x 63.5 cm each. © Luisa Lambri. All rights reserved.

Figure 161. View of interior main hall of Teshima Museum. Photograph by Carey Ciuro.

Figure 162. View of interior main hall of Teshima Museum. Photograph by author.

Beyond the elements of time and space the project represents an abstraction of a similar concept found in Modernist projects – minimising the use of structural elements. Compared to previous projects by SANAA, the Teshima Museum is an interpretation of abstract processes that depart from the often-implemented diagrammatic architecture, where architectural elements adopt the role of diagrammatic symbols. The abstraction here can be read through the material use and its necessity to express the architectural concept, through a more fluid expression of space that tests the notion of a diagrammatic transformation. The lack of columns and beams is resolved through the technological and design progress of construction and results in a highly sculptural space that is not concerned with support, it just is. It is an architectural approach that is very distant from the abstraction of the grid, its rationality and "universal objectivity".[87] Instead, it presents an architecture that focuses on the experience of the space and as such becomes an abstraction of a Deleuzian nature.

Through the photographic work of Lambri, the Teshima project's abstract elements may be distinguished and analysed separately, each method of abstraction logically and methodically identified. But, most importantly, as in Lambri's work and that of other artists working with abstraction, the Teshima Museum exudes an experimentality in which ways architecture may approach abstraction, not only structurally, but essentially as an experience. In art, abstraction emerges as a form of expression without specificity, without representation. In architecture abstraction is seen to emerge as a form to express without embellishment. As such, it indicates what abstract photography has shown through the years, that abstract architecture cannot be defined in disciplinary or hegemonic ways, following clear sets of rules. Such an architecture would cease to be architecture but an artefact, a sculpture, or a non-concrete idea. Instead, abstract architecture here is understood to take the form of a space of experience, one that transfers concepts through its realisation, that does not represent but that has affect, to follow Deleuze's definition of abstraction.

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[87] Victoria Watson, 'Abstract Architecture and the Desire to Make Something That Is New', *The Journal of Architecture* 4, no. 1 (January 1999): 81–87, https://doi.org/10.1080/136023699374025.

Figure 163. View of interior main hall and its openings. Photograph by Iwan Baan, 2011. © Iwan Baan. All rights reserved.

Conclusion: Abstract interpretations

For the Modernist architects abstraction was a process of searching for purity: it was an aesthetic device employed as a weapon against existing architectural expressions that also succeeded in representing the cultural values of its time, that were moving towards globalisation and the creation of a universal language, an expression of mass production and its economic approach. Abstraction, though, was also a common ground in which architecture could find new approaches to experiment with. Adopting abstraction as a language, history has shown that architecture recreates itself through drawing and diagrams with new interpretations, crossing boundaries of reality and utopia and blurring the borders between painting, sculpture, and architecture.

To achieve this, however, architecture has had to take a step back and look through different lenses. Photography has provided architecture with a new way of seeing that has not only helped in focusing key ideas to be further worked on, but has also provided alternative directions in which to explore. The work of artists such as Hiroshi Sugimoto, Thomas Ruff, and Luisa Lambri, as well as artists in previous periods of history, have introduced through abstraction a means to distance architecture from its image and refocus through a contrasting medium. Using the image, artists

question architecture and its objecthood and rethink it as an environment that is composed of abstract terms.

The Modernist housing attempts that implemented abstraction through various means demonstrated that not all forms of abstraction are conducive to 'good' architecture. Yet photography is enlisted once more to salvage valuable learnings from these experiments and suggest their continued relevance. The directions that these ideas can take may lead to other controversial outcomes, but the questions that transpire are conducive to a stimulating and progressive architectural discourse. The example of the Teshima Museum is one such controversial outcome, especially when compared to the previous examples of buildings. The role of architecture and its relation to art, its ambiguity between sculpture and functionality are brought forth through the implementation of abstraction. The relation of a specific example to the landscape produces even more questions on the role and identity of 'landscape', 'architecture', and 'sculpture'. It is worth mentioning how art theorist and critic Rosalind Krauss addresses these subjects through discussion of works by Rodin, Richard Serra, Robert Smithson, and others, bringing up this very blurred, perhaps even illusive, boundary between architecture and the arts.[88] In this, abstraction is not only a visual means or physical device, but most essentially, as is also evident throughout this research, it is a conceptual approach that, through its photographic expression, has allowed it to provide a critical view up to the present day.

If nothing else, delving into the subject of abstraction here has presented a subject that, although ever-present in recent architectural history, not only lacks adequate recognition in and of itself as a key architectural theory, but also often appears to be misused. Playing such a crucial role in Modernist architectural developments it has remained a constant medium of contemporary design approaches and acts as a critical frame through which architecture's identity, in both building and urban scales, can be questioned. Abstractive photography allows us to see the role of abstraction in architecture and provide visual reference to what is essentially a conceptual approach. Most importantly, however, it demonstrates that in the intersection between abstract photographic and architectural investigations architecture becomes challenged to address itself as a spatial practice and opens up new definitions that encompass "heterogeneous temporalities", "ceaseless transformations", and "transitory functions".[89]

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[88] Rosalind Krauss, 'Sculpture in the Expanded Field', *October* 8 (1979): 31–44, https://doi.org/10.2307/778224.

[89] Manola Antonioli, 'Virtual Architecture', in *The Force of the Virtual, Deleuze, Science, and Philosophy* (Minneapolis, MN: University of Minnesota Press, 2010), 169–90.

Conclusion

When John Berger presented his *Ways of Seeing* in 1977, he did not specifically focus on architecture, but instead discussed art and the controversial role of publicity.[1] These "ways of seeing", however, appear to go well beyond these subjects, responding to a broader state of perception and understanding, which of course have an immediate effect on the relation between humans and their surrounding built environment. In all the case studies explored in this thesis the role of these "ways of seeing" has been, first, one of a fundamental reframing of perspective; second, as a medium of communication between different practices, interpretative approaches, and disciplines, and last, and most importantly, following on from communication, they have functioned as critique. Besides, *Ways of Seeing* was in fact at its core a critique itself, of the effect of society, culture, and education on our changing perceptions of, and reception to, the visual, the image, and most essentially our surrounding environment as depicted through these mediums. Applying this approach to the examination of photography in this context has demonstrated its unexpectedly expansive relevance to our perception and comprehension that reaches far beyond its initial realms. This exploration has unveiled a profound interconnectedness of photography and architecture and has underscored the correlation of diverse photographic approaches with the constant and successive questioning of both architecture's identity and its subject matter. Equally, it has presented that these architectural developments in history, whether older or more recent, are multi-faceted and layered, in a way that may be unlocked with a slight shift of perception, becoming relevant and insightful again. These "ways of seeing", then, can be perceived as the key to unlocking these hidden depths and unpacking old learnings for them to be re-examined and reveal new ones.

The intersection of photography and architecture is definitely one that is fraught with risk as much as with potential, depending both on the perspective from which it is considered and the aims intended by either discipline. In an attempt to focus more on the possibilities, the research has tried to frame the role of photography by approaching it through its artistic emancipation, not only by limiting the "types" of photography investigated but also by approaching it from a theoretical and interpretative point of view. As such, this research may be considered rather constrained "photographically", but it presents the necessity for architecture to be examined through alternative perspectives. Here, the lens of the camera transforms to a critical perspective that sheds light on dimensions of architecture that have not been fully considered at length, have been dismissed, or have been misinterpreted. Seeing this from an architectural standpoint, photography presents an opportunity to consider architectural ideas and teachings from a non-architectural position, one that is just as much involved with its architectural concerns. At the same time, as photography develops and

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[1] Which today refers more accurately to advertising.

evolves, specifically considering Michael Fried's account of its emancipation, it is clear that architecture follows in its footsteps, benefiting from this development to a certain degree. The architectural developments in the 1970s that parallel the acknowledgement of photography as a distinct artistic discipline are not merely serendipitous, but denote a link that has been greatly overlooked in architectural theory.

As a result, the research has concluded, through several examples presented here, that although photography's role in the development of architectural ideas and practices has not received the acknowledgement it merits, it has nevertheless exerted a significant presence and influence. In every case study, from Typology to Abstraction, the research has underscored photography's indispensable role, impacting the trajectory and conclusions of these architectural notions in diverse ways. Concurrently, it has revealed that the historical development and delineation of photography, despite the many crossovers with architectural events and influences, has oftentimes operated as an external force that has guided and complemented the shaping of formative architectural outcomes. This discovery positions the emancipated photography of architectural landscapes as a distinct field that, even so, is inextricably linked to architecture. This is a distinction that has consistently proved its significance throughout the research, since through it, both architecture and photography, become two separate fields that in their own way engage with the built environment, its meaning, and its potential. As initially hypothesized and elucidated throughout the research process, the influence and interaction between architecture and photography was by no means unidirectional; on the contrary, it was not even possible to completely separate these two fields from other influences, other scientific or artistic fields and the socio-political and cultural environment in which they took place. This also presents the potential for further connections between architecture and other recognised or yet to be recognised fields to be explored in a similar way to this and that could potentially uncover new or disregarded findings. The essential result of this thesis is the demonstration of the methodological approach of the research, the "ways of seeing", that has acted as a form of critical analysis, not only bringing to the surface the until recently veiled and misrepresented role of photography in architecture but an exigent state of architecture's outdated definition and development.

The premise of this research, delving into the role of artistic photographic representation of the architectural landscape within the architectural discipline, emphasises a noteworthy observation: despite architecture's interdisciplinary nature, its perspective and approach have oddly remained rather constrained. While the initial focus is on photography, each case study progressively uncovers a broader pattern of limitations within architecture – an inclination toward selective assumptions and appropriation of practices and ideas. In this context, photography serves as an illuminating example that unravels a recurring theme within architecture: the transition from the subject of photography to the overarching theme of the research, the "ways of seeing". Ultimately, this specific critical approach, derived from John Berger's original concept of "ways of seeing," emerges as the primary outcome and proposition of this thesis. This approach proves both effective and indispensable,

particularly in today's stagnant and antiquated definition of architecture, not only in its views on photography, vision, and visual expression, but also in the unveiling of other possible areas that have fared similarly to photography – with notable examples being drawing and abstraction that were mentioned in the final case study. The thesis functions not only as a methodological framework but also as a substantive subject, advocating for a more incisive approach to architectural analysis and education. Both as a methodology and as a subject, the thesis proposes an approach to architectural analysis and education, a more critical approach of what is understood as architectural interdisciplinarity that would greatly benefit not only the way architecture is being taught at universities, the way it is being practiced professionally, but also the way architecture is being regarded as from outside its field. The "ways of seeing", therefore, becomes a proficient lens through which this research engages with established architectural notions, uncovering oversights, misconceptions, and outdated viewpoints. This mode of critical analysis holds remarkable potential, adaptable for adoption both as a formal course of study and as an influential cognitive paradigm.

The value of such an approach is presented through the case studies explored in this thesis, a dual perspective of architecture from both within and without the field. These case studies focus on specific architectural "ways of seeing" that are seen here to be expressed mostly in an approach associated with the Düsseldorf School of Photography. This stands as a testament to the timely emergence of these artists, their recognition and influence and the almost architectural approach they took to photography. Due to this, while they were selected with the understanding that they provided a narrow lens through which to examine this photo-architectural relationship, they demonstrate that in general this form of photography has correlated relatively broadly with the architectural developments of the last few years. On the one hand, this may be attributed to photography's increasing democratisation and ubiquity, its openness to implementation and adoption, and its status, to date, as a discipline not yet constrained by a need for a resolved definition. On the other hand, it produces a somewhat restricted way of communicating, one that is processed by architecture. This mode of communication stems from the visual translation of ideas, thoughts, and processes via photography, effectively conveying architectural notions back into the realm of architecture itself. Each photograph and artist in this context embark on this communication journey with their distinctive approach, rendering the process a truly unique form of expression and resulting in equally unique and diverse outcomes in each case study.

In the chapter on Typology, this is seen through the chronological coincidence of an architectural subject that is approached by both sides, and which in both cases has played a significant role in the development of both disciplines. In conjunction with the following chapters, it emerges that the type of photography encountered in Reframing Typology, the objective style of architectural representation that the Bechers espoused, informed a particular architectural approach within this school of photography, which, instead of constraining it within an architectural field, rather facilitates its reception in a more open way. This form of photography, with its methods and methodologies,

their objectivity and diligence, proposes a contemporary form of "architectural drawing", presenting the traditional elevation, perspective, and plan through photography by following similar values and aims. This common ground of communication then allows a common focus for discussion, and, as seen in subsequent chapters, ideas further explored in the arts use this medium in order to find a way of returning to, and within, the architectural discourse.

Perhaps one of the most visibly interdisciplinary architectural developments of the 1960s-'70s, the projects by Denise Scott Brown and Robert Venturi, and especially their 'Learning from Las Vegas', introduce more clearly this immediate communication between photography and architecture and how photography also acts as a medium to allow other disciplines and practices to inform architectural learnings. Beyond this, though, it succeeds in highlighting instances where the interaction between photography and architecture is not one way but through time, and different projects, becomes recycled and emerges anew with new learnings. Questions of originality and precedence that might have arisen in the context of typology are now becoming irrelevant, considering the difference between the approaches and the value each disciplinary approach has to offer. What it does question, however, seen from a more modern perspective, is what has become of this investigation of the vernacular/ordinary, of the role of photography within architectural education and what its legacy has been transformed into in today's educational environment.

Photography becomes a 'devil's advocate' in the chapter entitled 'Space of Absence', critiquing the relationship between architecture and what is perhaps its most fundamental subject, the human being. The framing, scale and timelessness of the photograph manage to convey the role and misgivings of architecture through its relationship with the human presence it contains. This exploration between social space and architecture within photography pushes the boundaries of how to think about architectural space, introducing social considerations through the construction of photography and the proposing of space as an extension of humanity. Taking on notions of light, colour, and composition, both Candida Höfer and Thomas Struth present architectural space not as a physical structure but rather as a combination of immaterial elements that construct experience. Contemporary collaborations between artists and architects succeed in showing that such contemplations of space are not only limited to the arts but can also be part of architectural practice. Through one specific practice, explorations and learnings about space through photography that were discussed earlier acquire physical presence. The architectural practice Kuehn Malvezzi propose a built experience that is temporal, transformative, and experiential, yet concrete and functional. Such a specific example, however, prompts questions about how these spatial and experiential ideas that are visually communicated may take a physical form in a broader architectural field. It also raises questions about the feasibility and sensibility of such an undertaking, the issue of "constructing" space visually and the disparity between what is seen two-dimensionally and what is experienced physically.

Some of these questions are visited in the following chapter, (Un)Realim, an undertaking that functions more out of the necessity to include this very crucial subject that is always unavoidably present in a discussion of photography than an attempt to explore it at length. As part of the progression through the chapters of the thesis, here the question on architecture's identity and its self-definition begins to take a clearer form. Photography, although until now having appeared as such a source of fresh perspective and critical evaluation, can also be seen here to be endangering the very nature of architecture, its reception, dissemination, and value as a material and physical space that follows, and is constrained by, natural, economic, judicial, societal, and political laws. When used by architecture, outside of its previous artistic context, photography reverts to being a tool. It can also be seen that it is also a matter of the right perspective from which photography is received, and in this case this chapter attempts to clarify that there is a clear distinction between the image of space and space itself, that the nature of photography should challenge us to be more critical and see what lies beyond the image.

Finally, this exploration of photographic and architectural crossings ends on an ambiguous note that might well describe the current climate in both photographic art and architecture. In Abstraction, art photography recognises an underlying concept that has informed architecture for almost a century, yet in the way it was considered by its implementors, and later by its critics, abstraction was never realised to its full extent. Today, when such attempts do indeed find their way to being realised, whether in photography or architecture, they also urge caution in the defining of abstraction, for what is considered to be the core essence of these disciplines might not be sufficient to ascertain their full identity.

As part of reframing perception and communication, the research also sheds light on the issue of architectural "language". The understanding of notions and ideas within architecture appears to require a certain familiarity with, and to acknowledge the pre-existing architectural relevance of, notions external to architecture in order to develop fully within architectural discourse. The Düsseldorf School of Photography and similar photographic approaches not only fulfil these prerequisites: they also complement them. Their architectural "language" is seen to be processed through their own "ways of seeing" and re-emerge into the architectural field to be adopted and integrated.

This exchange transpires through a variety of ways, which bring with them their own learnings. The structure and development of this thesis was one such unplanned outcome that gives even more emphasis to this subject of architectural "language". Beginning with the most clearly defined theory of architectural typology and its corresponding photographic exploration by the Bechers, that fortuitously and hospitably shared the term to enable an intelligible beginning to this exploration and building of the thesis, the next chapters presented a gradual difficulty in defining the subject. The subject of vernacular architecture and its field of investigation immediately introduced a divergence in approach between architects and photographers and an ambivalence between "ordinary"

and "vernacular", hinting at an undefined, and rather broad and uncertain, subject. Although this situation, that was open to interpretation, enabled the intersection of art and architecture and facilitated the broadening of architectural research to include theory unmediated by architectural developments and the consideration of other factors, at the same time it constrained this approach to what may be considered as a singular example of proactive architectural investigation in recent architectural history, the 'Learning from Las Vegas' project. In the cases of both typology and the ordinary, photography is seen to continue to explore these areas and question their conventions.[2] In architecture, however, while typology enjoys a similar interest, the role of the study of the vernacular and its intersection with Pop that gave it such a seminal character has been greatly subdued.

Figure 164. Michael Wolf, Paris Tree Shadows #1-10, 2014, archival pigment prints on Hahnemeuhle art rag paper, individual dimensions 105 x 77 cm, © Michael Wolf. All rights reserved. (Composition from Thomas Tallis School blog).

In the following chapters the situation becomes even more blurred, the most problematic issue being a lack of clear-cut terminology. Presence (or absence), reality (or fiction), and abstraction, all face, in their own way, a certain ambiguity within architectural theory, despite being subjects that not only recur frequently but that also form a particularly central focus in much recent architectural discourse. On the former, the question of the human presence seems to be considered superfluous within architectural discourse, and since architecture is designed for people, the lack of such consideration could surely only produce unsuccessful architecture.[3] There is also the situation where architecture is not meant for people, or when its role is to somehow subvert their presence for various reasons – for example, Daniel Libeskind's Jewish Museum in Berlin –the question cannot then be

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[2] As seen in Michael Wolf's undertaking of both approaches, and of a continued interest in these two subjects as indistinguishable photographic approaches from amateur to professional practices.

[3] Where successful being conducive to protecting, housing, and nurturing people as in John Cary, *Design for Good: A New Era of Architecture for Everyone*, (Washington, DC: Island Press, 2017).

framed around success or benefit in the same way. This issue of social space and humane architecture becomes central in the examples of Candida Höfer and Thomas Struth's work, and by definition is also a central part of architecture. Yet in architectural discourse the subject of presence is never encountered in a similar way: the role of human presence, the social role of space and architecture, are different descriptions of the same thing, a subject that is so inextricably architectural yet that lacks its own architectural presence. In a similar fashion, the question of reality and fiction, of physical versus imaginary architecture, while integral to the identity of architecture's disciplinarity, is not always consistently represented and its meaning fluctuates. In contrast, when conceptual architecture gains physical presence, its change in status raises multiple questions of what constitutes the original representation, whether both the representation and the end result can be considered architecture, whether architecture that is realised can regain its conceptual status, and many other forms of such existential variations. These questions, though, produce new enquiries into what "architectural representation" and "representation of architecture" mean: such an inversion often has a different meaning, although in both cases they communicate that a variation between them has more or less architectural value. Unlike the cases discussed earlier, the last chapter on abstraction finds this issue of architectural "language" in the form of its grammatical use. In Modernism, "abstract" is seen more often as a verb, taking on an active role as a methodical approach of omission. In contemporary architecture, "abstract" is taken up as an adjective, denoting a sense of symbolism and non-specificity. In both of these, though, abstraction remains a term that cannot really be defined. Its interpretation remains open: it can take up any form of process, representation or meaning; it points towards without being indicative, and it expresses without demonstrating.

In all of these cases the primary medium for foregrounding these subjects has been the photograph. It is evident in this research that because the camera and its products were consigned by architects to the role of tools, any findings or developments from their use and implementation were either disregarded or their role in any conception was greatly minimised. This has meant that the process of revisiting many of the historical case studies has been like revisiting an archaeological dig, finding new information and obtaining different interpretations with the fresh knowledge that photography is not only a medium of depiction and representation but is also interpretative and expressive on its own account. Analysing the photograph is then incomplete without an understanding of the circumstances within which it was created and by whom the image was captured. For example, the function of images throughout this thesis varies from main case study subject to simple depiction, the former having the advantage of rigorous analysis and consideration, while the latter has a very practical role of supporting the former. This acts not only as a critique of the distinction we place on photographs, the way they have been taken and the manner in which they are used: it also demonstrates how a formerly spatial and conceptual architectural discourse has recently been reduced to a visual presentation.

The emancipation of photography of the architectural landscape and the "ways of seeing" developed in this research for its exploration and analysis have showcased what a simple change of perception to a well-known and established subject may uncover. From the limited bibliography on photography from an architectural standpoint to the anachronistic vision of architecture, the emancipation of photography has acted as an excellent example to both frame a necessary critical approach and to bring forth different ways of engagement, raising new questions, and challenging the established views. The five main case studies explored here have provided the foundations to support an architectural "ways of seeing" that can and should be further applied to other facets of architecture, whether it is its practice, analysis, or education. In essence, the proposal that stems from this thesis is a fundamental shift in perception that allows for a reassessment of the established knowledge. The architectural "language" mentioned above is one example of potential further examination that results from a consecutive application of "ways of seeing", with architectural visualisation and architectural drawing being the original subjects that while briefly touched upon here for the purposes of the thesis could further benefit from an in-depth dedicated exploration of their development and definition. The interdisciplinary nature of architecture is another architectural element that is brought to question through this approach, and as it has been witnessed through the example of the subject of photography, it counts as one more subject that is in need of a clearer definition and revisioning. The technological advancements, as well as the changing social, cultural, and political notions of the last few decades, that more and more challenge the definition of vision and the visual, of the physical and the immaterial, and of the role of architecture in the built environment and the everyday life constitute this thesis as a caution that draws attention to the immediate necessity of reviewing and updating architecture's understanding of these notions. Besides, as it has been seen here, through the lens of art and photography, the very identity of architecture is called into question: what it represents, what it encapsulates and how far towards art can it venture and still retain its architectural value. Photography not only proposes possibilities for the disentanglement of this conundrum – it also opens the way for a consideration of it, and, going even further, for a return to a more inclusive understanding of architecture, one that is not limited to specifics but is open to engagement with any other discipline and any topic. As Eisenman noted, architecture needs to rethink its understanding of vision, and Berger's "ways of seeing" presents architecture with the opportunity to do exactly that.

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