AUTHENTICATION OF SPACE: THE PHOTOGRAPH AS A RAW MATERIAL FOR ARCHITECTURAL PRODUCTION

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ABSTRACT

AUTHENTICATION OF SPACE: THE PHOTOGRAPH AS A RAW MATERIAL FOR ARCHITECTURAL PRODUCTION

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This thesis is a critical reconsideration of the relationship of architectural production with its unique mode of representation: “photography.” Photography has been interpreted essentially as a technique and a visual medium to document architecture in general. The “photograph,” in this sense, is regarded as a representational form of documentation and an artistic and material expression of architecture. Besides this conventional value, this study argues that photography not only provides a new medium for the reinterpretation of architectural space, but also a new material and technique for architectural production. In this respect, this study discusses photography as an emerging tool for architecture in which the photograph is conceived as a raw material. As in the manufacturing of a raw material in an industrial process, the main argument of this study is that as long as a photograph is processed with required components, it contributes to architectural production in a comparable manner. Even it has the potential to produce architectural space in its own right.

To understand the nature of this architectural space supported by a variety of physical and non-physical characteristics of photography, this study compares two different ways of architectural production with the aid of photographs. Starting with the assumption that there is a radical change in the conception of photography in architecture from an immaterial quality to material essence, this study argues that the photograph is a raw material that can be used to authenticate architectural space from the initial idea to the built object. Therefore, drawing attention to the changed value of photography for architecture over time, the aim of this study is to establish a critical framework to understand and discuss this contemporary function of photography in architecture.

Keywords: photography/photograph, immaterial/material quality, authentication, print, raw material

ÖZ

MEKANI ÖZGÜNLEŞTİRMEK: MİMARİ ÜRETİMİN DEĞERLENDİRİLMESİNDE MİMARİ BİR MALZEME OLARAK FOTOĞRAF

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Bu tez, mimari üretimin gösterim biçimlerinden biri kabul edilen fotoğrafın, mimari ürün ile olan ilişkisinin eleştirel bir incelemesidir. Fotoğraf, genel olarak mimarlığı belgelemek için kullanılan teknik ve görsel bir ortam olarak yorumlanabilir. kendi çerçevesi içerisinden bakıldığında tekniğin elverdiği koşullar doğrultusunda nesnel ve işlevsel olduğu kadar estetik bir değer de taşıyan fotoğraf, mimari imge söz konusu olduğunda, salt belge olma değerinin ötesinde bir temsil değeri kazanır. Bu değer doğrultusunda ise mimari bir temsil nesnesi olarak kullanılabileceği gibi, mimarlığın sanatsal ve maddesel bir ifadesi olarak da algılanabilir, hatta fotoğrafın mimarlık için rolünün, kendi maddesel varlığıyla da mimari üretimin bir parçası olduğunu tanımlayan bir yaklaşım öne sürülebilir. Bu gözle yeniden ele alınan fotoğraf, mimari bir malzeme olarak da kabul edilebilir. Bu nedenle bu çalışma, bilinen işlev ve değerinin ötesinde fotoğrafın, mimarlığın yeniden yorumlanmasını sağlayan bir ortam olduğunu kabul etmekle kalmaz, aynı zamanda, mimari üretim sürecinde yaygın olarak kullanılan yeni bir malzeme ve baskı tekniği olduğunu da iddia eder. Fotoğrafın değişen değerine dikkat çekip inceleyen bu tezde ise, bu bulgular doğrultusunda fotoğraf, mimari üretim için henüz işlenmemiş bir “malzeme” olarak tartışılacaktır. Buna göre

endüstriyel süreçte, bir hammaddeden ürünün üretilmesinde olduğu gibi, temel olarak fotoğraf da, gerekli bileşenlerle işlendiği takdirde mimarlık üretimine katkıda bulunur. Hatta başlı başına mimari mekan üretebilir. Bu tez, bu malzemenin ürettiği mimari mekan ile özdeşleşebileceğini, bu yüzden de fotoğrafın mimarlık üretiminde işlenebilir bir tasarım metodu olduğunu, hatta mimari temsil ve ürünü dönüştürebileceğini iddia etmektedir.

Bu doğrultuda, mimarlığın algılanma biçiminde maddesel olmayandan, maddesel olana önemli bir değişimin olduğunu varsayarak başlayan bu tez, fotoğrafın bir "hammadde" olarak başlangıç fikrinden, inşa edilmiş nesneye kadar her türlü mimari mekanı özgünleştirebileceğini öngörür. Bu bulgular doğrultusunda ise fotoğrafın zaman içerisinde değişen değerine dikkat çekerek inceleyen bu tezin amacı, fotoğrafın mimarlıktaki yeni beliren bu rolünü tartışabilmek adına eleştirel bir çerçeve oluşturmaktır.

Anahtar kelimeler: fotoğraf, maddesel olmayan / maddesel olan, özgünleştirme, baskı, mimari malzeme

To My Family

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CHAPTER 1

INTRODUCTION

This thesis is a critical reconsideration of the relationship of architectural production with its unique mode of representation: “photography.” Photography has been interpreted essentially as a technique and a visual medium to document architecture in general. The term “photograph,” in this sense, is regarded as a representational form of documentation, and an artistic and material expression of architecture. Architecture as a term, on the other hand, refers to the processes and the products of designing, arranging, constructing, and analyzing “spaces” that reflect functional, aesthetic and environmental aspects. Space as such a multi-layered and broad term has many references in architecture. The physicality of its products usually restricts its definitions. In other words, when space is assumed more of a physical act; architecture would simply be understood as the physical articulation of borders.

However, space is not only the inert background of the material existence of architecture, like a place, environment or surrounding. In the same way, architecture is not simply a spatial enclosure. Building, in this context, should not be conceived only as a physical body but also as a critical enterprise. The building as a spatial entity is defined with the immediate experience of its users. Within this experiential process, the building’s material characteristics - like form, shape, texture, light, or transparency are perceived. It is, in fact, those material properties that differentiate buildings in space.

Seen from that perspective, the building is the substance of architectural space. In this connection, material and experience are essentially the distinctive elements that separate architectural space from any space. A distinct spatial configuration can be created even with the different use of the same material. In fact, different from physical space, architectural space may not be always about

physical surroundings and bodily inhabitation, but it may also be conceptualized on the basis of idea and representation.

Besides the abovementioned experiential understanding of space, which is generally associated to the material characteristics of architecture, there is also immaterial characteristics in architecture - for instance, its political expression, ideological expectations, scientific explorations, or socio-economic investigations - that might prove that architectural space can also be defined within its immaterial qualities.[1]

Therefore, taking into consideration the spatial qualities of architecture, this study designates the terms "material" and "immaterial" to theorize architectural space. Respectively, while the physical, tangible, and experiential possessions of architecture are regarded as material properties, any kind of idea, conception, movement, style, or ideology represented within a building is denoted as the immaterial. Learning from Ferdinand de Saussure's theory of the sign, this formulation of architectural space underlines the point that building on the one hand, with the physical space it encloses in a built environment, emphasizes its material quality and become the sign of architecture, while on the other; it may signify immaterial values of architecture such as Modernism and its various representations.[2] In this relational framework, this study locates the "photograph" in a critical position in-between architecture's immaterial conception and its material expression.

The representational relation between the building and the photograph will be elaborated in the following chapters. In fact, the conceptualization of photography is essential within the objectives of this study because parallel to

[1] See Henri Lefebvre, "Social Space," The Production of Space, translated by Donald Nicholson-Smith. Cambridge, Mass., USA: Blackwell, 1991, pp. 68-168 for "political" and "social appropriation" of space.

[2] This study learns from the theory of sings, yet, the objectives of this study do not involve debates about semiology or semiotics. Instead, this study interprets the terms such as "sign," "signifier," "signified," "denotation," and "connotation" to conceptualize the immaterial and material qualities of architecture through photographs. In this respect, this study learns from Ferdinand de Saussure's Course in General Linguistics, Roland Barthes's Mytholgies and Elements of Semiology and John Fiske's Introduction to Communication.

the varied tools of architectural representation, the medium of photography has the potential to explore both the material and immaterial qualities of architecture. With that, in this study, the term “photograph” gains significance.

It should be noted that the process of “taking a photograph” would not be taken into consideration, since this study is concerned with neither the position of view, nor the location of object. Likewise, the histories and development processes of photography as a representation or presentation technique are far beyond the scope of this study. In this respect, this study is not a reconstruction of photography’s evolution in history; rather, taking for granted the influences of technical advances and material interactions, it asserts that besides the well-known values and functions of the photograph as a document and a representational medium, a new function of photographical expression in architecture has emerged.

The photograph, different from photography, refers to the physical object that is held in one’s hands. In fact, the terms “photograph” and “photography” etymologically share the same roots; yet, they are just different expressions, which are separated from each other technically.[3] While the photograph as a physical entity contributes to the material existence of the architectural object, photography as a tool of artistic expression and theoretical understanding functions as a means of visual communication for the development of an immaterial aesthetic particularly in the arts and subsequently in architecture - in a way different from previous forms of representation. In this connection, either analog or digital, photography is often used in a highly unconventional and creative technique to document, describe, or identify architecture.

[3] The term “photography” comes from the combination of the Greek words “*photos*” (light) and “*graphos*” (drawing); in other words, it means “drawing by light”. Therefore, as combined by Sir John Herschel in 1839, from “photo- + -graph,” photograph is the "picture obtained by photography," or the "instrument for recording." The term was also named as “sunprint.” Learned from the Online Etymology Dictionary, the noun “photography” refers to the activity, process, and mechanism of picture making, while the “photograph” which is both a noun and a verb refers to an act, end-product, object, picture, or empirical evidence.
Retrieved: http://www.etymonline.com/index.php?search=photography&searchmode=none
[last accessed: 21.10.2009]

Photography has been interpreted essentially as a technique and a visual medium to document architecture in general. Ever since its inception, it is understood as a technique to "record and reveal" in terms of images it produced; which are all assumed instant depictions of objects. Recalling the common description, light patterns that are reflected or emitted from objects activate a sensitive chemical or electronic sensor during a timed exposure, usually through a photographic lens in a device known as the "camera."[4] The camera stores the resulting information to pass it further on a tangible medium, which is known as the "photograph." In this way, the photograph, which is the printed form of photography, functions as a document verifying the existence of architecture and transferring its image to future generations.

As once questioned by Hubert Damisch (1928-), theoretically, photography is nothing other than "a process of recording, a technique of inscribing, and a stable image generated by a ray of light."[5] However, the camera, which is thought to be detached, is capable of suggesting a radical change in reality. Images can change with the photographer's viewpoint and the viewer's perception. Thus, quoting Damisch, Liz Wells indicates that "the camera is neither neutral nor impartial but was constructed to reproduce established image conventions."[6]

In that regard, reckoned without considering the vantage point of the camera, photography is an "automatic" action that positions the "photograph" as a particular type of a phenomenon between "technology" and "visuality."[7] Nevertheless, photography is not only the act of taking and printing photographs or the process of producing images of objects on photosensitive surfaces;

[4] For more information visit the Online Encyclopedia Britannica web page: http://www.britannica.com/EBchecked/topic/457919/photography [last accessed: 12.11.2009]

[5] Hubert Damisch. "Five Notes for a Phenomenology of the Photographic Image," October, Vol. 5, Photography, the MIT Press, 1978, p. 71.

[6] "Photographic Seeing," The Photography Reader. ed. Liz Wells, London; New York: Routledge, 2003, p. 84.

[7] Drawing attention to the conventional meaning of the term and the process of "photography," Liz Wells notes that Hubert Damisch was writing this essay in 1963, at a time when a number of writers were attempting to comprehend the photograph as a particular type of phenomenon.

photography also encompasses a quality which makes itself, as well as its subject, a part of visual culture in general. Visual expressions are embedded in visual forms of media, communication, and information; and therefore, the above-mentioned characteristics of photography can serve diverse purposes particularly in art. Architecture, however, uses photography for its own disciplinary purposes. Architecture understood as a discipline[8] necessitates visual tools of documentation, then representation, and their dissemination to fulfill its theoretical principles. The photograph, which has been used to make critical and expressive statements about the built world, can fulfill this need with its visual and communicative potential. For that reason, architecture mostly expresses its physical qualities and implicitly disseminates its material existence with the aid of photographs. Accordingly, beyond its value as a document, the photograph is regarded more of a representational medium for architecture.

In fact, it is certainly difficult to deny the centrality of the "photograph" in a discussion on architecture and its representation. Since the discovery of the camera, photography has been widely used by architects as a visual instrument to present and sustain the image of their work. Besides the so-called "conventional representation tools of architecture" – such as the sketches, orthographic drawings, models, and computer imagery – the photograph has been used to represent architecture from the initial design stage to the built object, even after its construction.

Yet, architecture has an intricate relationship with its modes of representation. As the conception of architecture changes in the course of time, this relationship has evolved and as Kester Rattenbury has pointed out in the book "This is not Architecture," it has become "peculiar, powerful, and absolutely critical."[9] In this connection, Rattenbury argues that architecture, which "is driven by belief in the nature of the real and the physical," or in other words, architecture, which can

[8] Assoc. Prof. Dr. Ayşen Savaş has stated in the course ARCH 513 INTRODUCTION TO ARCHITECTURAL RESEARCH that the current state of architecture can be regarded not only as a profession but also as an academic discipline. During the course, Savaş critically discusses how architectural knowledge is produced, disseminated, and received.

[9] This is Not Architecture: Media Constructions. ed. Kester Rattenbury, New York : Routledge, 2002, p. 11.

only be experienced physically, has begun to be understood "almost entirely through its representations."[10] Within these modes of representation, the photograph is dissociated from others with its capacity to "discuss, illustrate, explain, and even define"[11] architecture in its own right.

Indeed, photography has created such a significant effect in architectural representation that the photograph has been overrated and carried beyond representation. Besides using the photograph merely to demonstrate completed projects, architects began to describe, and settle any design idea with the photograph rooted in its representational quality. This notion of the photograph caused a controversial but important innovation regarding all phases of architectural processes. With that, further photographic interpretations have entered into the design stage of architectural projects, and, as a consequence, the photograph has begun to function as an architectural design element in its own right. Hence, the photograph not only became a fundamental figure in which architects determine the way their works are presented in printed media - magazines, catalogues, and newspapers - for the success of their designs; but it has also become a fundamental figure that architects can refer to from the initial concept to the built object. Thus, the photograph has gained another value that provided it with a different role in all stages of architectural production.

In this respect, it can be said that presentation of architectural work depends upon the influential and guiding capacities of the photograph. Yet, in time, this value assigned to the photograph in architectural processes has carried it to such a context that a photograph can take the place of an architectural object. This emphasis eventually created a discrepancy between the architectural object and its photographical representations. This discrepancy spreads itself too wide to declare its existence and thus photography - at certain instances - gains the

[10] In the historical outlook of architectural representation, as Kester Rattenbury has emphasized, perspective, photography, film, and e-technology have all affected architecture. From a broader perspective, Rattenbury questions the depiction of architecture via its representations and discusses how one's understanding of architecture is shaped in the book "This is Not Architecture."

[11] Ibid, pp. 11-3.

power to replace the architectural object.[12] Thus, the material quality of architecture can be replaced with the material quality of the photograph. For that shift, architectural object and architectural space needs to be redefined within the framework of this study.

The photograph of a building is an object, to say it precisely, a physical material such as photographic paper that can be hold in hand and that can literally be touched. The subject is the architectural object such as a building depicted in the photograph. The content can be any message communicated with the aid of the photograph.[13] Yet, regarding the nature of the photographic medium, there can be situations where the object replaces the subject, the subject turns into the object, or the content becomes the object. All of these circumstances will be explained in the following chapters.

With the above-mentioned conception of photography in mind, an instrumental definition for instance, such as the one given by Encyclopedia Britannica: "an image created by light falling on a light-sensitive surface, usually photographic film or an electronic imager," become inaccurate because the photograph cannot be conceived merely as an image within the issues that are relevant to the discussion in this study. Here, it is necessary to refer to the British art critic John Berger (1926-) and his book "Ways of Seeing;" yet, at this point, this study is interested in another aspect of the photograph. In this study, the term photograph is discussed in terms of printing. Accordingly, "printing," is taken as a key concept to elaborate the implications of technical means that is involved in the specific qualities of photography. In this respect, what is understood from a photograph can change due to the printing processes - how it is printed, and to which medium it is used for printing.

[12] This study lays special emphasis on the research of Beatriz Colomina. See, for instance, Beatriz Colomina. Privacy and publicity: Modern Architecture as Mass Media .Cambridge, Mass.: MIT Press, 1994.

[13] Once again, this claim has been made with reference to Beatriz Colomina's point of view where she offers an insight into the conception of photography and its field of discourse in architecture.

Nevertheless, this situation complicates the place of the photograph in the architectural discourse and grounds a base for further arguments. Within those arguments, on the one hand, a claim that the photograph is a visual construct can be asserted, while on the other hand, the photograph can be accepted as a part of architectural production within its materiality. Apparently, a distinction must be made between the physicality of buildings and their existence in architectural space, that is, their ability to establish space through the "material" and the "immaterial" characteristics. In this connection, the photograph as a visual construct has the potential to go beyond the mere representation of an architectural object (namely a building) to become an object of its own right.

In this process, a photo-mechanical reproduction can be achieved due to the nature of the photographic processes. There are 2 different tools of photography. On the one hand, there are the conventional practices such as composition of the frame, focusing, developing, light aperture control, shutter speed contrast, filters, different film stocks, film or sensor sensitivity. On the other hand, there is digital enhancement. These tools can be both creative enough to change the discursive content, meaning, and narration of architecture; therefore, the photograph becomes a critical tool for architects. In this way, the photograph gains an immaterial value. Moreover, as it is not new to say that architecture had been discussed more by black and white photographs than the actual buildings in the 20th century,[14] it is actually the content that forms the immaterial emphasis within photographs. In view of that, photographs can be pre-processed as in the case of staging, or, post-processed further to change the immaterial content. These conditions will be analyzed under the title of constructed photography in chapter 2.

Following the conception above, this is the claim of this study that (1) the photograph can construct architecture's image by its immaterial quality or (2) the photograph can physically create architectural space due to its material

[14] Beatriz Colomina has established the relation between black and white photographs and Modern Architecture in the book Privacy and Publicity: Architecture and Mass Media. Moreover, Sarah Williams Goldhagen's essay "Something to Talk About: Modernism, Discourse, Style," JSAH, vol. 64, no. 2, June 2005, pp.144-167 should also be referred to distinguish Modernism in terms of the immaterial content it embodies.

characteristics. It is also the proposition of this study that should be underlined that as the photograph is itself a physical existence, it becomes a new material for architectural production.[15] It is the abstract quality of the photograph as an object, or as a physical embodiment that provides its autonomy. Since technological developments improve this process, further creativity is dependent on the cutting-edge technologies. Therefore, printing photography is now a more sophisticated operation mechanism in architecture.

These claims, which position the photograph in-between immaterial conception of architecture and its material expression, will be elaborated respectively in chapter 2 and chapter 3 of this study. Yet, at this point, to understand the notion of the "print," it is proper to refer to Walter Benjamin's seminal thoughts about reproduction and authenticity. In order to conceptualize "photography in terms of authenticated print," it is necessary to understand the definition of these terms for Benjamin.

German critic and philosopher Walter Benjamin (1892-1940) examined the status and the place of artwork in the modern mass culture of the 1930s in his cultural analyses. In his seminal essay "The Work of Art in the Age of Mechanical Reproduction" Benjamin questioned the authenticity of the new mode of the nineteenth century's representation - film and photography - as a mechanically reproducible medium and argued that every work of art has an "aura" depending upon its market value - its restricted exhibition, its publicized authenticity - or its cultural value.[16] For Benjamin, "aura" is an indication to the feeling experienced in the presence of unique works of art that has not been reproduced yet; therefore, it symbolizes the originality and authenticity of a work of art. Benjamin calls them unique because although artworks can be reproduced and transported, they cannot be in two different places at the same time.

[15] This claim is formed with reference to contemporary architectural works, particularly considering the projects of the Swiss architectural firm Herzog & de Meuron.

[16] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," Illuminations. ed. Hannah Arendt, trans. Harry Zohn, New York; Harcourt: Brace & World, pp. 217-52.

Nevertheless, mechanical reproducibility, in which there is no actual original, has blurred the value of artistic creativity and therefore, the replicas, which were the images of artworks reproduced by photography, become omnipresent. Benjamin, interpreting the modern age, refers this cycle as "the loss of aura" and asserts that the effects of modernity on the work of art in particular have replaced the aura generated by a work of art. Benjamin discusses the loss of the aura through the mechanical reproduction of art itself and he relates it to the experience of art which could be freed from place and ritual. There is a loss of aura because, in the age of mechanical reproduction no work of art can survive and not become a valuable property.

In fact, nearly after 40 years, John Berger, in his book "Ways of Seeing" interprets Benjamin's thoughts about the status of artwork. Berger states that artwork has acquired a new kind of impressiveness, which is ultimately dependent upon its market value, and adds that this value has become the substitute for what paintings lost when the camera made them reproducible.[17] Yet, Berger relates the loss of aura with the concept of uniqueness and interprets uniqueness of artwork in terms of rarity. Berger asserts:

> By their nature, photographs have little or no property value because they have no rarity value. The very principle of photography is that the resulting image is not unique, but on the contrary infinitely reproducible.[18]

Considering Berger's claim, Benjamin's argument can be interpreted from a perspective where originality is associated with uniqueness. In this respect, a painting has an aura and a photograph does not, because painting remains original while the photograph is a copy. Accordingly, it can be deduced that Benjamin labeled the photograph "auraless" because he considered the photograph as a reproducible print. For Benjamin, reproduction is the process of mass production of many identical copies by machine through photography, print technology, and electronic recording according to the copying of visual images.

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[17] John Berger. Ways of Seeing. London, Penguin Books, 1972, p. 23.

[18] John Berger. "Understanding a Photograph," in Classic Essays on Photography, ed. Alan Trachtenberg, New Haven:Leete's Island Books, 1980, p. 291.

As these processes become increasingly sophisticated, the reproduction of original works of art has reached to a stage where the print has become, as Benjamin criticizes, a way to lead up to sameness.

The contemporary notion of the "print" in the arts, as well as in architecture, requires a different terminology. The act of printmaking should be examined in its own context. A print, which is made by an artist, is accepted to be authentic, because there is only a limited edition of prints predetermined, signed and numbered by the artist. Once the total number is reached and the edition is complete, the original block, stencil, plate or stone is either defaced or destroyed by the artist or the publisher, so that no more prints can be made.

Here what is meant by an authentic photograph is not the photo-mechanical production of print; but the artist's appropriation of that print to perform his creativity. In other words, the artist detaches the photograph from its original context and evaluates it in a new context as an artistic material. In this respect, the content in the photograph, its subject, or what it originally refers to is no longer an issue. Therefore, artists do not treat that image as a photograph, but as a fine print. In this connection, the fine print is a multiple original because the artist, from the outset intended to create an etching, woodcut, or other graphic work and thus conceived his image within the possibilities and limitations of that technique.[19] Therefore, such fine prints are considered original works of art, even though they can exist in multiple copies.

In this respect, the affinity and the exchange between the arts and architecture are no doubt both important and noteworthy; because mass reproduction of photographs through new printing technologies lead a radical change in photography's conception in contemporary architecture.[20] The photograph, which

[19] For detailed information about the main printmaking techniques including woodcuts, engravings, and intaglio processes, see the influential book by William Mills Ivins, Jr., How Prints Look: Photographs With A Commentary. Beacon Press; Revised edition, 1987.

[20] For instance, partner architects Jacques Herzog and Pierre de Meuron have declared their debts to the German artist Joseph Beuys in creating innovative techniques of construction with photographs. Artistic references of the architects' work can be seen in the complete works gathered by Gerhard Mack and in the book Natural History by Philip Urspung.

used to be perceived as a way of representation - seen mostly through magazines - gradually entered building interiors as a work of art as it has become an artistic object of exhibition.

Nevertheless, it is the technique and the development of this technique that has shaped the conception of the “photograph” in architecture. As the technique develops, the function and purpose of the photograph, which indicates an interface between architectural conception and its material expression, changes. Accordingly, the photograph also differentiates in itself physically and conceptually to reflect material and immaterial modes of architecture.

Likewise, as the nature of photography and its form, status, and characteristic can change due to social, political, economic and the technological developments, the material and immaterial expressions of architecture are also transformed to form a new understanding. Within this conception, the photograph indicates a constructed medium which leads to the reinterpretation of material and immaterial expressions of architecture. In this respect, conspicuously different from the previous modes of architectural representation such as the orthographic drawings and the perspective sketches, the photograph has distinct technical and aesthetic capabilities that cause further expansions in its intended use by architects.

Industrial printing enabled photography to be applied on paper as well as on concrete, glass, stainless steel or digital media. With that, architects made experiments with the photograph on buildings, particularly on façades. As a result, with the aid of light-sensitive solutions, any material or image can be printed on architectural surface materials, like a stamped print. Consequently, with the development in printing technology, the photograph has also gained another value as a building material. In fact, the photograph can literally be called as a “building material” because photograph on the scale of a building is

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Donald Judd, Gottfried Semper and Andy Warhol should also be noted as the other inspirational figures in Herzog & de Meuron architecture. Jean Nouvel, Rem Koolhaas, Erick van Egeraat can also be named as contemporary architects who present alternative approaches to emphasize creative transformation of technical images into new architectural concepts, particularly elaborated on the façade.

different from the one imprinted on paper. Regardless of the content it depicts, there is a change in spatial conception of the photograph. In this respect, despite the fact that the photograph is a mass-produced industrial object that inevitably makes it “a copy”; with the change in scale, context, and material; a result came up in a way to lead authenticity.

At this juncture, Andy Warhol, Robert Rauschenberg and Roy Lichtenstein’s printed works have a great influence on the development of the argument in this study. As in the arts, printed surfaces have created an unseen fashion in architecture in terms of the artistic styles and the aesthetization of buildings. Moreover, regarded as an artifact transposed from art into architecture, the photograph can influence the building construction processes. For this very reason, contemporary architecture has been appropriated with artistic themes and it acquired an innovative and conspicuous status as a frequently discussed topic.

In this respect, this study argues that photographic print on architectural surfaces attributes architecture an authentic value to alter its material characteristics. In fact, this authenticity is the distinctive value that separates the photograph from other modes of building-making techniques. As Berger has emphasized in the book “Ways of Seeing”:

> An image is a sight which has been recreated or reproduced. It is an appearance or a set of appearances which has been detached from the place and time in which it first made its appearance and preserved – for a few moments or centuries. Every image embodies a way of seeing. Even a photograph. For photographs are not, as is often assumes, a mechanical record. Every time we look at a photograph, we are aware, however slightly, of the photographer selecting that sight from an infinity of other possible sights. This is true even in the most casual family snapshot. The photographer’s way of seeing is reflected in his choice of subject. The painter’s way of seeing is reconstituted by the marks he makes on the canvas or paper. Yet, although every image embodies a way of seeing, our perception or an appreciation of an image depends also upon our own way

> of seeing. (It may be, for example, that Sheila is one figure among 20; but our own reasons she is the one we have eyes for.)[21]

Referring to Berger's point of view that the photograph communicates with its own way of seeing, it can be asserted that a novel and utterly different configuration evolves out of every process a photograph is involved. In this respect, the photograph as a building material can be considered as distinct from brick or stone, not only with its material qualities but also with its diverse visual perceptions. The photograph, in this context, enriches the content of architectural expression; it indeed characterizes architectural facades from its own point of view.

This situation also complicates the place photography occupies in architectural discourse. In this connection, as it might be open to further criticism, it can be said that the photograph which was once considered as a "tool" to document the representation of architecture, has become a material to produce architecture. This change also provided the photograph to form its own debate and characteristic mode in architecture. Regarding the way architect uses photography as a material or reveals its immaterial quality, the articulation of architectural space, gains a distinctive authentication. In this study, this authentication will be sought through the capability of the photograph to reveal those immaterial and material characteristics of architecture. Taking into consideration Walter Benjamin's discussion, and ascertaining the current statue of printmaking in the arts from Andy Warhol's works, this study argues that the photograph recently turns out to be a "raw material" for the production of architecture.

Seen from this point of view, besides being a representation tool to reify immaterial design ideas, the photograph seems to become the material object of architecture. Considering this emerging role of photography in architecture as a physical material for architectural production, this study argues that there is a radical transformation in architectural use of the photograph from immaterial application to material use.

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[21] John Berger. Ways of Seeing. London, Penguin Books, 1972, pp. 9-10.

Still, what is understood from the terms “immaterial” and “material” is interchangeable since those qualities signified by the building can also change in time within the above-mentioned relation of the photograph in architecture and regarding its medium. At this point, the emphasis of photography for the argument of this study become evident because as the conception of architecture changes in the course of time, the aforementioned conceptual framework can be intertwined one within the other. Within this conceptual framework, the following chapters of this study will trace the re-embodiment of photography as an immaterial appearance of architectural representation and a new material technique of contemporary architectural practice.

CHAPTER 2

IMMATERIALIZATION OF ARCHITECTURE:

THE RE-EMBODIMENT OF THE PHOTOGRAPH AS A "VISUAL CONSTRUCT"

> Every photograph is the result of a physical imprint transferred by light reflections onto a sensitive surface. The photograph is thus a type of icon, or visual likeness, which bears an indexical relationship to its object. [22]
>
> Rosalind E. Krauss

Despite the fact that the word "photograph" might suggest to the modern reader, a set of mechanically mass-produced images such as the portraits of family members, snapshots of daily events, instances of specific cases, technical data, or historic documents; in architecture, the photograph is mostly understood as the printed images of buildings in magazines, newspapers, or in various published media. It is the claim of this study, however, the term photograph has an influence on the immaterial processes of architectural production; architecture's design processes.

The two familiar terms: architecture and material, when used together, conventionally call for the solid and tangible qualities. The intellectual and conceptual activity, on the other hand, forms the immaterial quality of architecture. About that, contemporary Swiss architect Jacques Herzog expresses his opinion as follows:

[22] Rosalind E Krauss. The Originality of the Avant-garde and Other Modernist Myths. Cambridge, Mass.: MIT Press, 1985, p. 203.

> Architecture creates its own reality outside of the state of built or unbuilt and is comparable to the autonomous reality of a painting or a sculpture. … Certainly we love this tangibility, but only in a relationship within the whole of the (architectural) work. We love its spiritual quality, its immaterial value.[23]

Photography has been used to represent the physicality of architecture and the secondarily perceived messages signified with buildings. In this context, the "photograph" is assumed to have a significant role in architectural representation due to the fact that photographs can reveal both the physical reality of architecture and its immaterial manifestation. Since the nature of photography and its form, status, and characteristic can change eventually due to social, political, economic and technological developments and opportunities, the material and immaterial expressions of architecture are also transformed to form a new understanding.

Accordingly, while the conception of photography as a mode of architectural representation changes, the photographic medium as a means of visual communication and expression, led to the development of a new aesthetic in architecture in a way different from the previous forms of representation. Within this understanding, the "photograph" indicates a constructed medium which leads to reinterpretation of material and immaterial expressions of architecture. In this respect, conspicuously different from the previous modes of architectural representation such as orthographic drawings and perspective sketches, the photograph has distinct technical and aesthetic capabilities that cause further expansions in its intended use by architects

The most immediate effect of this medium in illustrating architectural ideas can be made by constructing the photograph of an architectural object, that is to say the representation of architecture. Yet, as architects treat photography as a visual medium to construct their ideas on; the distance between the immaterial and material characteristics of a building became so pressing that the expression of the immaterial in the photograph differentiates from the building it originally represents. For clarification, this study incorporates an alternative line of inquiry

[23] Gerhard Mack. "The Hidden Geometry of Nature," Herzog & de Meuron, 1978-1988: The Complete Works (Volume 1). Basel: Birkhäuser, 2005, p. 209.

into the discussion. Therefore, taking into consideration the fundamental characteristics of photography, which are key to the medium's specificity, the aim of the following part is to make a critical analysis of the intricate relationship between architectural representation and its "constructed" photographical expression.

2.1 Architecture as the Subject of Photography

Taken for granted the nineteenth-century desire for empirical evidence, it has been argued that photography represent events in front of the camera accurately since the key characteristic of photography is its ultimate dependence and reference to the subject presented at the moment of making the original exposure. This unique and distinctive relation between the lens and the object, technically and aesthetically determines the pre-conditions of the mechanical process of photographing. One of the required conditions is that the subjects have to be static to prevent the vision-blur; indeed the "sitter" could be clamped by an apparatus "to sit still" for the duration of the exposure. For that reason, architecture, in terms of the inherited quality of the building and its unquestionable static posture, has been the preferred subject of photography. Regarding this issue, Diane Agrest clarifies that:

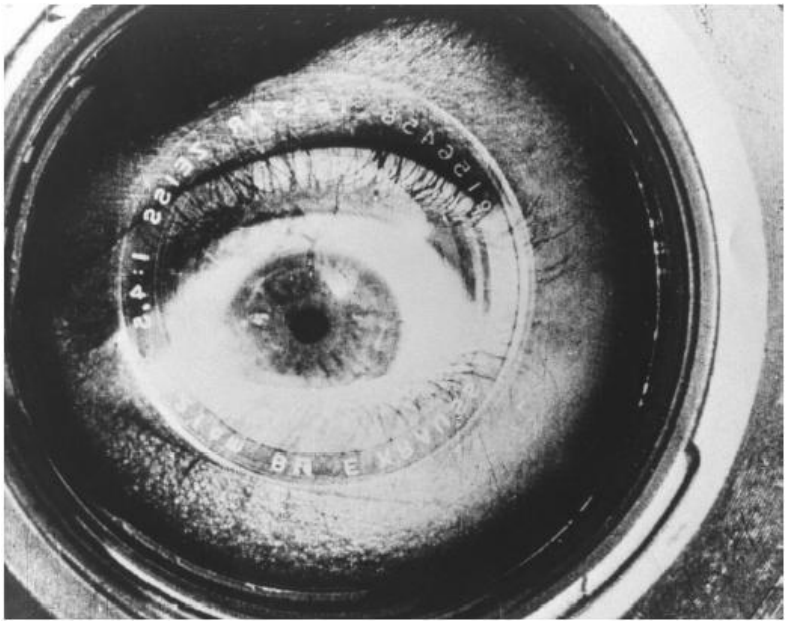
> Architectural photography derives from the first decade of photography – the time of Hugo, Niépce, and Daguerre – before the industrialization of photography when, due to technical limitations, the camera could focus only on static structures, places, and buildings.[24]

In this respect, it can be said that the photograph has an inherent connection with architectural production. Yet, this inherent relation of photography with architecture becomes negligible as creative experimentation encouraged new ways of seeing in terms of camera angle, focus, and geometry of the image. As discussed by Liz Wells, this new "way of seeing" altered perception and cultural understanding up to the extent that photography was seen as a part of the new

[24] Diana Agrest. "Framework for a Discourse on Representation," Architecture from without: Theoretical Framings for a Critical Practice, Cambridge, Mass.: MIT Press, 1991, p. 159.

machine age, essentially as "a modern mode of seeing."[25] In fact, the twentieth century was more of a period of technological developments and experimentations in terms of the specificity of the medium in itself.

The ability of the camera developed with the photographic technology that expanded the capabilities of the eye was interpreted as a kind of mechanical eye[26] in the 1920s and 1930s.



2.1 Still from Dziga Vertov's "The Man with the Movie Camera," 1928-1929
Source: Beatriz Colomina. "The Mechanical Eye," Privacy and Publicity: Modern Architecture as Mass Media. Cambridge, Mass.: MIT Press, 1994, p.78.

[25] "Photographic Seeing," The photography reader. ed. Liz Wells, London; New York: Routledge, 2003, p.83.

[26] Beatriz Colomina has started her photography essay related with the critique of media in architecture with this still from Dziga Vertov's movie in order to establish a relation to architectural representation.
Beatriz Colomina. "The Mechanical Eye," Privacy and Publicity: Modern Architecture as Mass Media. Cambridge, Mass.: MIT Press, 1994, p.77.

As the Soviet film-maker and cinema theorist, Dziga Vertov (1896-1954), expressed it in his movie “The Man with the Movie Camera”:

> I'm an eye. A mechanical eye. I, the machine, show you a world the way only I can see it. I free myself for today and forever from human immobility. I'm in constant movement. I approach and pull away from objects. I creep under them. I move alongside a running horse's mouth. I fall and rise with the falling and rising bodies. This is I. the machine, manoeuvring in the chaotic movements, recording one movement after another in the most complex combinations.
>
> Freed from the boundaries of time and space, I co-ordinate any and all points of the universe, wherever I want them to be. My way leads towards the creation of a fresh perception of the world. Thus I explain in a new way the world unknown to you.[27]

In this respect, besides using it for documentary, the photograph accepted as a mechanical eye, has an exclusive use in architecture in such a way that architects attribute a representational value to photography to express their design ideas.

Then, the photograph as a visual material reflect specific assumptions and expectations in architectural representation. One of them is the ability to “literally” depict the buildings. This literal depiction of the built environment was accompanied by the understanding of the photograph as an objective record or document. Indeed, William Mills Ivins, Jr. stated that “the nineteenth century began by believing that what was reasonable was true and it would end up by believing that what it saw a photograph of was true.”[28] In this perspective, photographic images can surely be defined as a “mechanical figure” which is produced instantaneously by the reflection of light; not produced by experience or consciousness.[29] From John Berger’s perspective, passé as it may seem, this quality of transfer or trace gives to the photograph its documentary status, or in

[27] Dziga Vertov. Kino-eye: the writings of Dziga Vertov, University of California Press, 1985, p.17.
John Berger referred to the revolutionary Soviet film director in ways of seeing, p.17.

[28] William Mills Ivins, Jr. is the curator of the department of prints at the Metropolitan Museum of Art from its founding in 1916 until 1946.
John Szarkowski. The Photographer's Eye, New York, Museum of Modern Art; 1966, p. 9.

[29] John Berger, “The Ambiguity of the Photograph,” in The Anthropology of Media : A Reader, ed. by Kelly Askew and Richard R. Wilk. Blackwell Publishers, 2002, p. 53.

the art critic and theorist Rosalind Krauss's (1940-) terms "its undeniable veracity."[30] Yet, Krauss argues that this "veracity" is beyond the reach of those possible internal adjustments that are the necessary property of language of representation.

This is due to the fact that photographing is linked to a number of technical aspects that have to be set immediately at the time of exposure; or else, the content and accordingly the resulting photograph can change. This shows that the "supposed" objectivity of a photograph can change. By the same token, the essential elements of a photograph need to be established immediately at the time of the exposure.

Nevertheless, the fundamental function of taking a photograph involving documenting the existing scene "as it was" does not always prove true when it is used as an architectural tool. With this respect, the photograph can be defined as an embodied form of a mechanical act including a variety of expedients such as the quality of light, perspective, viewpoint, relation to other objects, time of exposure, distortion - or lack of it, the capacities of the lenses, graininess, and the tonal effects of colored objects. Although it is widely defined as "the process, activity, and art of creating still or moving pictures by recording radiation on a sensitive medium, such as a photographic film, or an electronic sensor," what makes photography critical in terms of architecture is not the chemically or electronically creation of photographs, but the medium's capability to have the control to change the subject and therefore the content in it.

In this sense, the type of camera, the film format and speed, lens, and aperture have great importance since the content of the photograph can be simply controlled by adjusting the angle of view, depth of field, exposure or shutter speed. In that regard, Susan Sontag (1933-2004) describes in the book "On Photography" that the photograph is not merely an image – as a painting is an

[30] Rosalind E Krauss. The Originality of the Avant-garde and Other Modernist Myths. Cambridge, Mass.: MIT Press, 1985, p. 203.

image - which is directly printed from the real like a footprint; but an interpretation of the real.[31]

In fact, tools of photography can be described as a distinct quality rather than ambiguity in architecture. By this way, the architect becomes the decision maker for the essential qualities of the content of a photograph and is able to interpret it according to his or her judgments. In this context, architectural historian James Ackerman (1919-) asserts that when the British amateur scientist William Henry Fox Talbot (1800-1877) announced his invention of a paper negative from which multiple photographic prints could be made in 1839, Talbot chose to emphasize the technical aspect of his craft, because he predicted its value as providing evidence and as a means of documentation.[32] Yet, Ackerman asserts that Talbot must have been aware of the error of defining photographic images "simply as reproductions of reality, ignoring various elements of choice (of subject, position, framing, lighting, focus, etc.) that reflected and addressed the ideology and taste of its time."[33] This situation will lead the photograph to become a man-made cultural artifact, rather than being merely mechanical reproductions.

In this context, photography in the architectural domain raises a number of interesting and far-reaching issues of artistic, educational, philosophical, and technical nature. Moreover, the power of the photograph as a document might confuse its role in architectural representation. Therefore, the other expectation of the photograph mentioned above is the ability to construct the idea of architectural works instead of being immediate representations of objects. This is due to the fact that the technical variables give the photograph a value to go beyond being a document that each subtle variation in viewpoint, light or environmental condition, each passing moment, or each change in the quality of the print can create a new photograph. The photographer Edward Weston

[31] Susan Sontag, On Photography, electronic edition by Rosetta Books, New York, 2005, p.120.

[32] James S. Ackerman. "The Photographic Picturesque," *Artibus et Historiae*, 24: 48. 2003, pp. 73-94.

[33] Ibid.

(1886-1958), who was the co-founder of the Group f/64 with Ansel Adams (1902-1984), clarifies the notion of the photographical technique as follows:

> By varying the position of camera, camera angle, or the focal length of the lens, the photographer can achieve an infinite number of varied compositions with a single, stationary subject. By changing the light on the subject, or by using a color filter, any or all of the values in the subject can be altered. By varying the length of exposure, the kind of emulsion, the method of developing, the photographer can vary the registering of relative values in the negative. And the relative values as registered in the negative can be further modified by allowing more or less light to affect certain parts of the image in printing. Thus, within the limits of the medium, without resorting to any method of control that is not photographic (i.e., of an optical or chemical nature,) the photographer can depart from literal recording to whatever extent he chooses.[34]

In this connection, if tools of photography have the ability to re-construct the content of depicted images; then the building as the subject of a photograph can be re-constructed in the space of architectural representation. Re-construction of the building's image by "photography" indicates that the building itself is reconfigured in visual and representational media. In fact, the nature of the photographic process has a unique feature that separates the photograph from other modes of architectural representation. It is with this diversity that the following part will develop an argument on the photograph's potential to re-produce the image of architecture.

2.2 The Photograph as a "Visual Construct" for Architecture

The term "construction" refers in the arts to the creating or forging of images and artifacts. In the practice of photography, apart from documentation, the term particularly draws attention to the deliberate arrangement of the immaterial characters of an image through "staging, fabrication, montage, and image-text

[34] Edward Weston, "Seeing Photographically," in Classic Essays on Photography, ed. by Alan Trachtenberg. New Haven, Leete's Island Books, 1980. p. 173.

works."[35] Liz Wells clarifies this situation in the book "Photography: A Critical Introduction" as the "crafting" of images that have been staged or appropriated and adjusted for the camera. American critic A.D. Coleman, on the other hand, describes them also as "falsified documents."

The term "constructed imagery" derives from Soviet Constructivism as the concept of the previously mentioned Dziga Vertov's mechanical eye and the theories of assemblage. It emphasized the role of art in the structuring of a new social order and used industrial elements in order to put them together as works of art. In this respect, "constructed photography" retain the authority of any kind of photographic imagery wherein the immaterial ideas of an artist is evident; in other words, a constructed photograph is an image preconceived by its author. This "preconceived" situation is regarded in the arts mostly under the captions of composition, collage, or montage.

Except from documentary photography or photojournalism, the term "good composition" refers to a "constructed vision" in the field of photography, especially in fine art photography. In fact, the problematic between photography and reality results to the extent that a photograph was no more understood as a reflection of reality. As a consequence, the belief of the photograph ended up being far from the transcriptions of the real, but rather, photographs were treated as complex material objects with the ability to create, articulate, and sustain "meaning." In this respect, as it has been previously declared with reference to Berger's claim, photographs transformed the way of seeing, thinking and experiencing the built world.

This "constructivist" alternative to the "realist" aesthetic has largely dominated photography in the period following the World War I. Architectural photographer Ezra Stoller (1915-2004), who interpreted the works of Modern Architecture, argues that eventually, every facet of photography is subject to control, and the way in which it is manipulated affects the ultimate record.[36] Stoller further argues

[35] Photography: A Critical Introduction. ed. Liz Wells, London; New York: Routledge, p. 282.
[36] Ezra Stoller. Photography and the Language of Architecture, Perspecta, Vol. 8 (1963), pp. 43-44.

that the results can be judged only by the “information it conveys,” and by “how forcefully and clearly they are projected.”[37] Likewise, John Szarkowski (1925-2007), who was the director of photography at the Museum of Modern Art, New York, from 1962 to 1991, has commented that the invention of photography provided a radically new picture-making process based not on synthesis but on selection. In this regard, as Ackerman asserts, the term "to make a picture" is more appropriate than the term “to take a picture.”[38]

As it might be open to further criticism, John Berger interprets this making of photographs from a different standpoint arguing that photographic images constitute a global system of misinformation that is known as publicity. Accordingly, Berger asserts that photographs can be used to “deceive and misinform.”[39] Indeed, Berger describes this characteristic of photography in his studies and regards that all photographs are “ambiguous.”[40]

Taking into consideration Berger’s interpretation, passé as it may seem, the first question that come to mind is whether this ambiguity stems from the potential of the photograph as a constructed artifact has an impact on the conception of architecture. Secondly, since selection and control are the decisive points of interest in this new kind of representational process, the control of the architect over the selection of the immaterial qualities leads to a key change of the outcome. And this change raises a creative issue of a new order. Taking for granted this mechanical process of photography as a creative process, then it can be argued that this creativity may alter the content depicted, therefore, the photograph can be used as a critical tool for architects rather than being straightforward depictions. In this respect, the following part searches if the

[37] Ibid.

[38] James S. Ackerman. “The Photographic Picturesque,” *Artibus et Historiae*, 24: 48. 2003, pp. 73-94.

[39] Berger argues that painting or drawing is a translation of the real or imagined "model" onto paper, together with every mark and space which has been already set out previously.
See John Berger, “The Ambiguity of the Photograph,” in The Anthropology of Media : A Reader, ed. by Kelly Askew and Richard R. Wilk. Blackwell Publishers, 2002, p. 53.

[40] Ibid, p. 50.

photograph can be able to alter any discursive content, meaning, and narration in architecture.

2.2.1 "The Constructed View"*

To clarify the conception of "constructed photography" in this study, it is explicatory to bring forward architectural photographer Julius Shulman (1910-2009) and his photographical representations of the Stahl House designed by the architect Pierre Koenig in 1960. Shulman introduced his photograph of Koening's house, which is also known as the Case Study House no.22, under the title of "The Constructed View." [41] In fact, there are two different photographical reproductions of the Californian style house made by Shulman; hence, the naming of the photograph can be understood when it is compared with Shulman's previous frame of the house. (Figure 2.2 and Figure 2.3, on page 27)

The first depiction unveils architectural details technically, by emphasizing its documentary value; while the other one, constructs the photographer's interpretation of both architecture and the popular lifestyle of the period. Comparing those two photographs, Pierluigi Serraino argued that photography can affect the context and audience of architecture and yet get ahead of it. According to Serraino:

> On one side, photographs serve a documentary function; on the other, they provide the readership with the opportunity for comparative exercises and critical reflection on diverse designs.[42]

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* "The Constructed View" is the title of Julius Shulman's iconic photograph for the the Case Study House no.22 designed by Pierre Koening.

[41] The photograph is analyzed in the book This is Not Architecture by Kester Rattenbury under the title of "Framing Icons, Two Girls, Two Audiences, The Photographing of Case Study House #22"

[42] Pierluigi Serraino. "Framing Icons: Two Girls, Two Audiences, The Photographing of Case Study House #22," This is not Architecture : Media Constructions, ed. by Kester Rattenbury, Routledge, 2002, p.129.

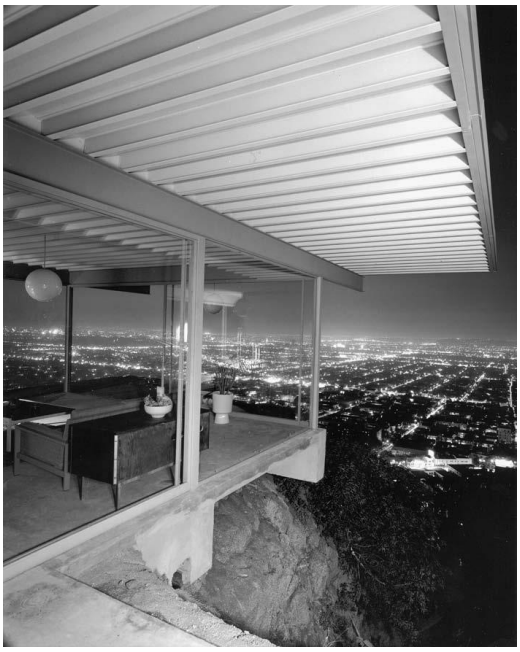

Figure 2.2 (left) No girls, Photograph by Julius Shulman. This photograph was the architectural editor, John Entenza's preference for publishing since it documents a naked architecture with a flexible, context-free, and International outlook.
Source: Pierluigi Serraino. "Framing Icons: Two Girls, Two Audiences, The Photographing of Case Study House #22," This is not Architecture : Media Constructions, ed. by Kester Rattenbury, Routledge, 2002, p.128.

Figure 2.3 (right) Two girls, Photograph by Julius Shulman. This one reveals the photographer Julius Shulman's interpretation of both Modern architecture and a constructed architecture with a re-contextualized and fictional atmosphere.
Source: Ibid, p.130.

Serraino explicates that the unadorned and "naked" version of the house was published way before than the second photograph. Pursuing the architectural ideals of the publisher and the editor of the magazine, John Entenza – Entenza was at the same time the executer of the Case Study House Program – Shulman highlights the structural and bare experience of the house. Yet, the house in the 1st photograph seemed as if it were flowing in the air, giving the message to the users that it could be built anywhere. In this way, the photograph is like a document of International Style. In fact, it promotes the bringing of International Style. Nan Ellin comments in her book "Architecture of Fear" as follows:

> The photograph itself has appeared in practically every architectural magazine throughout the world as well as many books on architecture, thus helping to allay the public's fear of the structural capabilities of modern architecture.[43]

However, as it was staged in the second photograph – when the lights were lit, plants were placed to create a garden effect, and the sun-bed was positioned at the only connection point of the house and the cliff - all of the efforts to detach the house from context would become reversed. Thus, besides his photographer skills, the second photograph was re-contextualized by Shulman simply by changing the furniture with the ones representing a particular architectural style, and by positioning two properly dressed women inside in order to encourage a modern life-style that attracted attention more than the structural details of the building.

Moreover, Shulman argues that much of Modernism's effect can be grasped from the reactions to his photograph "A Constructed View". It is largely for this reason that photography proved an ideal medium for Modern architecture. As "the new architecture was to be truthful, direct, and a rational construction," photography, "a medium that never lied," illustrated it as such.

With respect to Serraino, these photographs can actually be understood differently in terms of context. Yet, both of the photographs are set up or produced according to different architectural thoughts. In fact, Shulman's attempt for the 2nd one might be considered as "pre-processing" or "staging" a photograph, probably to fictionalize a modern atmosphere. Indeed, in the photograph below, Shulman is seen behind the scenes while photographing the house, or more accurately, taking a test shot for the design of the stage-setting. (Figure 2.4, on page 29) This instant proves that the photograph has cinematographic fiction beyond an instantaneous shot of a documentary. Therefore, Shulman can be said to set the stage of his photograph from the beginning and architectural staging of a photograph can be understood with this respect.

[43] Architecture of Fear, ed. by Nan Eliin. Princeton Architectural Press, 1997, p.131.

Figure 2.4 (top) On the Job. Julius Shulman photographing the editorial version of Pierre Koenig's Case Study House No. 22 in Los Angeles.
Source: The Los Angeles Times Webpage: http://www.latimes.com/entertainment/news/arts/la-me-julius-shulman-pg,0,4206294.photogallery [Last Accessed: 22.01.2009]

Figure 2.5 (bottom) "Julius Shulman Stood Here"
Photograph taken by Linda Theug, Los Angeles, 2006
Source: The photograph is shared on the Flickr, The Online Photo Management and Sharing Web Site by "geezopeez": http://www.flickr.com/photos/geezopeez/257907345/ [Last Accessed: 10.11.2009]

The photograph above showing where to stand and look as did Shulman, is also interesting - although it has a touristic purpose. (Figure 2.5, on page 29) By footing at this tagged standpoint, everyone can make his own "constructed view" simply with a compact camera.

Likewise, as revealed by the architectural theorist Beatriz Colomina, Le Corbusier's photographical representations of his earlier design of Villa Schwob can be considered as a constructed view. Having compared the original frame of the villa and its latter representations in *L'Esprit Nouveau,* (Figure 2.6, on page 31) it is seen that on the contrary to the pre-staging of Shulman, Corbusier constructed his already built villa by post-processing techniques.

Colomina explains the adjustments made by Le Corbusier as follows:

> In the *"façade sur la cour*," for instance, he (Le Corbusier) masked the pergola in the court, leaving its white trace on the ground, and cleared the garden of any organic growth or distracting object (bushes, climbing plants, and the dog house), revealing a sharply defined outer wall. He also modified the service entrance to the garden, cutting the protruding vestibule and the angled steps with a straight plane aligned with the door. The window corresponding to the vestibule became a pure rectangular opening.[44]

In fact, it should be remarked that Le Corbusier built the villa in his maturing years - as a young local architect in his Swiss hometown of *La Chaux-de-Fonds* under his birth name: Charles Edouard Jeanneret. His 1916-dated design for the villa - also known as *La Villa Turque* - was influenced by his travels in Turkey, and it combined ornamental characteristics with the structural freedom afforded by the dramatic and novel use of reinforced concrete as a building material. The villa had a rather conventional look compared to his subsequent designs that made him the greatest Modernist architect of the 20th century.

[44] Beatriz Colomina. "Le Corbusier and Photography," Assemblage, no. 4, Oct., 1987, p.12.

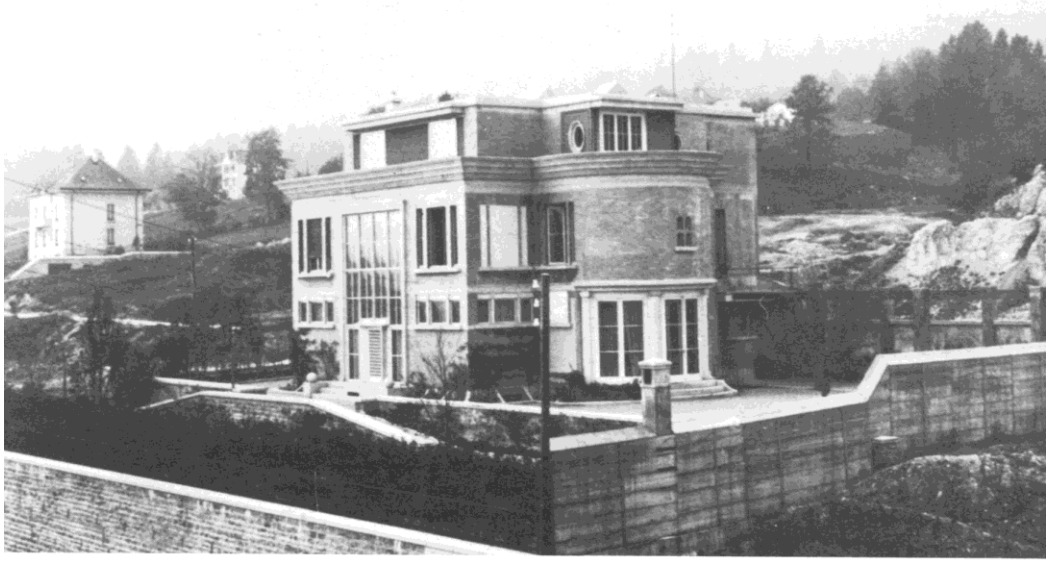

Figure 2.6 (top) The original view of Villa Schwob, 1916.
Source: Beatriz Colomina. "Le Corbusier and Photography," Assemblage, no. 4, Oct., 1987, p.13.

Figure 2.7 (bottom) The constructed view of Villa Schwob as published in *L'Esprit Nouveau* 6 by Le Corbusier, 1921.
Source: Ibid.

Despite the strong play on geometric volumes, the building was stuck in-between modern and classical design. For that reason, Le Corbusier re-constructed the representation of his villa, afterwards, to make it look more “Modern,” or to be precise, to put the image of this building in his publication, "*L'Esprit Nouveau*." In this way, the constructed photograph of the villa became the first of Corbusier’s early works to be considered worthy of publishing in his publication.

Similarly, Colomina further states that Le Corbusier’s corrections were not limited with rearrangement of the garden; Le Corbusier discarded every picturesque and contextual thing in the house - eliminating any reference to the actual site such as a steep terrain - to concentrate on the formal qualities and to make his architecture freed of place in order to achieve the ideal site.[45] Accordingly, proper to Le Corbusier‘s architectural insight, the photographs of his architecture seemed as pure or ornament-free as his developing modern approach.

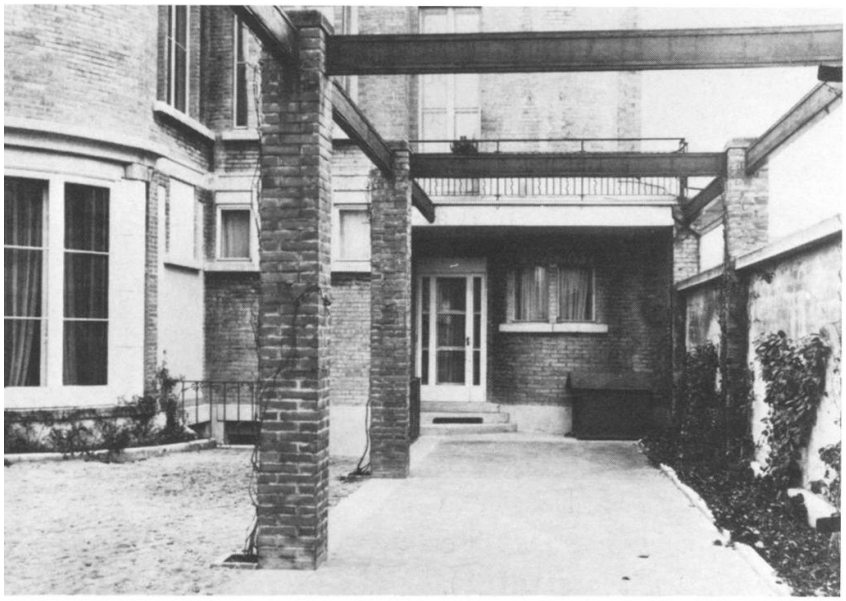

Figure 2.8 Detail of the “constructed” pergola, by Le Corbusier, 1920.
Source: Beatriz Colomina. “Le Corbusier and Photography,” Assemblage, no. 4, Oct., 1987, p.13.

[45] Ibid.

Therefore, as indicated by the architectural theorist Beatriz Colomina in the book “Privacy and Publicity,” Le Corbusier retouched his photographs "to adapt them to a more purist aesthetic;” or to say it in other words, Corbusier constructed his photographs by using post-processing techniques to explore immaterial qualities of his architecture. For the same reason, it can be said that liberating from the domination of classical tastes, Le Corbusier used the medium of photography to detach his “new” architecture from its place of origin. In this way, Corbusier alters the immaterial quality of his architecture. Photographically de-contextualized, for Corbusier, this new architecture is international in style and lightweight, moreover mobile in appearance.

Une Villa
DE LE CORBUSIER
1916

Dans ses articles remarquables de l'*Esprit Nouveau*, Le Corbusier-Saugnier, architecte, avec modestie, ne s'est occupé que des rapports de l'ingénieur avec la construction moderne, afin de mettre en évidence les conditions primordiales de l'architecture : le jeu des formes dans l'espace, leur conditionnement par les procédés de construction. Il a montré que le calcul peut introduire à une grande architecture, que les moyens de construire actuels (financiers et techniques) offrent des ressources plus vastes que ceux des époques passées.

Le Corbusier sut, dans ses articles, lui artiste, faire momentanément abstraction des qualités de sensibilité qui font l'artiste, pour dégager, avant tout, les moyens de l'ingénieur,

Figure 2.9 Villa Schwob as published in *L'Esprit Nouveau* 6 by Le Corbusier, 1921.
Source: Beatriz Colomina. “Le Corbusier and Photography,” Assemblage, no. 4, Oct., 1987, p.12.

Le Corbusier's emphasis to the presentation of his works can be distinguished from other modern architects by comparing the level of architect's self-control and creative control compared to the original. For instance, Richard Neutra (1892-1970) had re-touched the photographs of his buildings as Le Corbusier did. However, Neutra did not take the photographs himself but he worked with the architectural photographer Julius Shulman. On collaboration of an architect with a photographer, Serraino has asserted, "through their camera, photographers bring a consistency of visual representation – on which architects capitalize." [46]

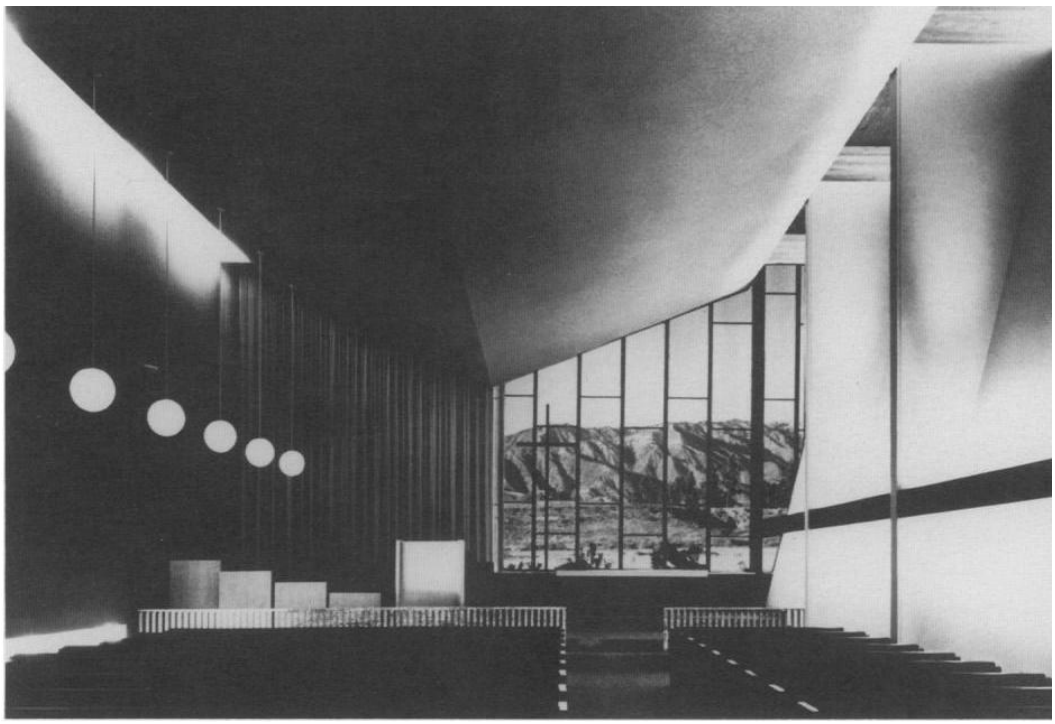

Figure 2.10 The constructed photograph of the Claremont Methodist Church, by Richard Neutra, co-working with Julius Shulman, 1959.
Source: Simon Niedenthal. "Glamourized Houses": Neutra, Photography, and the Kaufmann House," Journal of Architectural Education, 47: 2, 1993, p. 109.

[46] See Pierluigi Serraino. "Framing Icons: Two Girls, Two Audiences, The Photographing of Case Study House #22," This is not Architecture : Media Constructions, ed. by Kester Rattenbury, Routledge, 2002, p.129.

Given the photographic print of the 1959-dated Claremont Methodist Church of Neutra above,[47] (Figure 2.10, on page 34) Simon Niedenthal has pointed out the architect's recovering and refining design intentions in his essay as follows:

> A print of the nave in the archives not only exhibits grease pencil retouching, but the photographer has also used a mask in printing to control the view of the mountains beyond. Neutra darkened the contrasty altar rail, extended the right edge of the mountains outside the window, and also brought down the values of some bright areas of exterior landscaping. [48]

Niedenthal also calls attention to the note Neutra wrote on the back of the print:

> Claremont Methodism started in the open landscape. The left half of the altar wall is a resounding organ chamber behind an acoustically permea drape. The right half reveals a mountain scenery which rises to snow capped Mt. San Gorgonio, which is gradually revealed, as the worshiper proceeds . . . toward the communion rail.

and annotates that

> Neutra attempted to supply the missing temporal element in his description on the back, and perhaps his extension of the line of the mountains is an attempt to stimulate the view from an angle other than the one chosen by the photographer or even to stimulate a moving perspective."[49]

Moreover, Niedenthal notices that both Le Corbusier and Richard Neutra appreciated re-experiencing their architecture in the realm of ideas, but unlike Le Corbusier, Neutra's modifications were rather personal and he did not publish his projects. In fact, as Niedenthal emphasizes, Neutra's design process ended by the time the photograph was taken, not after the building was completed or built.[50]

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[47] Richard Neutra also contributed an introduction to Julius Shulman's 1962 design text Photographing Architecture and Interiors, titled "The Photographer and Architect."

[48] Simon Niedenthal. "Glamourized Houses": Neutra, Photography, and the Kaufmann House," Journal of Architectural Education, 47: 2, 1993, p. 108.

[49] Ibid. pp. 108-9.

[50] Ibid.
It is understood from Julius Shulman's writings and interview notes with the architect that Richard Neutra's obsession with photography affects the completion of his design process.

Still, having highlighted in the essay "Le Corbusier and Photography," under the caption of "faked images," Beatriz Colomina defines this kind of photographical expression of architecture as a "faked" process.[51] Accordingly, Colomina introduces Adolf Loos – for whom a photograph cannot fully represent architecture – as "the most radical architect" and criticizes against photograph's impact on the image of architecture. Indeed, as Jean-Louis Cohen has remarked, Loos claimed in the 1910-dated essay *Architektur* that "the representation of architecture should not produce its own effect."[52] Moreover, Colomina mentioned in her essay that Loos criticizes architectural magazines since they triggered the confusion of architecture with its image. Therefore, in contrast to Le Corbusier, Loos did not print any photographs in his magazine *Das Andere* (the Other).[53] Yet, as Jean-Louis Cohen expresses, according to Le Corbusier, this is also a context of production with its own autonomy, but for Loos, it is a way to distance himself from the temptations of the "photogenic" – "from the editorial inflation that he already so presciently perceives – in favor of the virtues of direct 3-dimensional experience." [54]

2.2.2 The Conception of Photography as a Tool for the Immaterialization of Architecture

If at first the use of photograph seemed to align with Modern Architecture technically, ideologically, and theoretically, eventually it betrayed Modernism from becoming what it truly wanted to be. As technique progressed, for more and more, architecture was known through photography, and photography construed architecture as an image. This is why architectural theorist Diana Agrest (1945-)

[51] Beatriz Colomina. "Le Corbusier and Photography," Assemblage, no. 4, Oct., 1987, p.12.

[52] Beatriz Colomina. co-ed. "The Misfortunes of the Image: Melnikov in Paris," in Joan Ockman (ed.), Architectureproduction, New York: Princeton Architectural Press, 1998, p. 103.

[53] Ibid. "Introduction: On Architecture, Production and Reproduction," p.13-5.

[54] Ibid, "The Misfortunes of the Image: Melnikov in Paris," p. 103-4.

prefers to call architectural photography as “architecture through photography.”[55] Hence, probably following Walter Benjamin, Kester Rattenbury claims that the representations are often treated as they were architecture itself, furthermore, a photograph of a building has become “almost more definitive” than the building itself.

Probably, for those reasons, contemporary architectural firm Herzog & de Meuron use merely photographs in exhibitions to depict their architecture. As in the case of Le Corbusier, architects Jacques Herzog and Pierre de Meuron are aware of the capabilities of the medium of photography. The architects clarify their fascination with photography in their own words as follows:

> We grew up with the idea that photography was the one medium that faithfully depicts reality. But the medium has always been manipulated and nobody believes its authenticity anymore.[56]

By digitally processing the pictures, the partner architects believe that the so-called “reality” of the medium is achieved paradoxically. In this respect, Herzog & de Meuron consciously form a habit to create a constructed reality of their architecture, mostly by manipulating the photographs of their design from an artist’s viewpoint.

Herzog & de Meuron’s display in the 5th International Architecture Exhibition, Venice Biennale, in 1991, is an inspiring contemporary approach to constructed photography as a means of architectural representation. The intention of the architects was to represent their design neither by drawings nor by models. Since architecture cannot be displayed literally in an exhibition, simply its representation is exhibited figuratively. Therefore, the only concern of Herzog & de Meuron was depicting the image of their architecture. Consequently, the exhibition area - Swiss Pavilion - was dedicated solely to the photographs of their buildings.

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[55] Diana Agrest. “Framework for a Discourse on Representation,” Architecture from without: Theoretical Framings for a Critical Practice, Cambridge, Mass.: MIT Press, 1991, p. 164.

[56] Philip Ursprung. “Imprints and Moulds,” Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 244.

Yet, in contrast to Le Corbusier, Herzog & de Meuron drew the line between architecture and art. Emphasizing their identity as architects, they left the act of taking photographs to professional photographers and artists. Still, the architects followed a different routine and collaborated with a number of artists including Balthasar Burkhard, Thomas Ruff, Hannah Villiger and Margherita Krischanitz to find the right kind of photography, which best suited their architecture. Moreover, Ricola Storage Building in Laufen, as the subject of the photograph, provided challenging topographical conditions for the photographer.

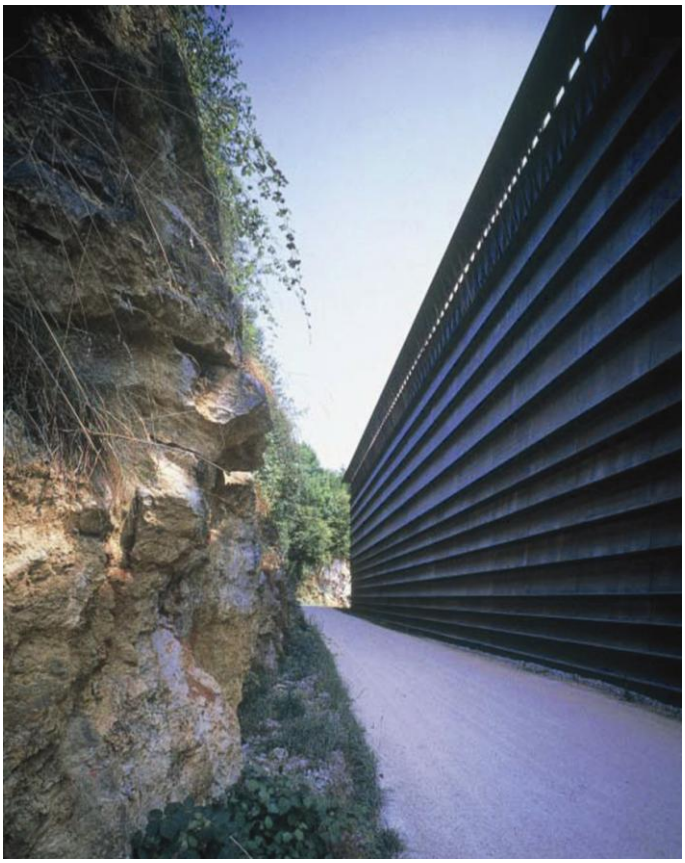

Figure 2.11 Ricola Storage Building, Laufen, by Herzog & de Meuron.
Photograph taken as it is by the photographer Margherita Spiluttini, 1994.
Source: Source: Gerhard Mack. Herzog & de Meuron, 1978-1988: The Complete Works (Volume 1), Basel, Birkhäuser, 1997. p.152.

German photographer Thomas Ruff states that, “it was impossible to fit the whole building into a single shot by using conventional techniques, since the warehouse was too big and the distance was too short.”[57] For that reason, Ruff suggested a succession of digitally joined frames to reach an elevation-like large-format photograph. Not surprisingly, the architects prefer Thomas Ruff’s constructed photograph to put on display in the exhibition. (Figure 2.12)

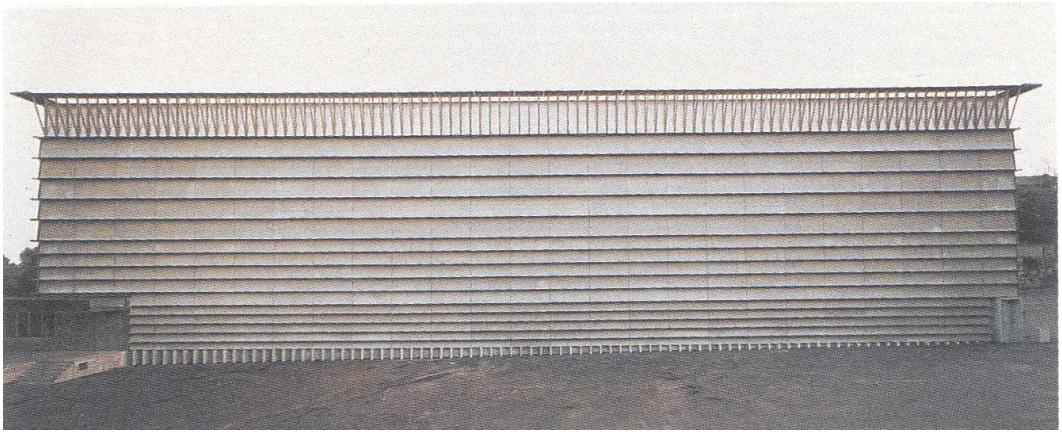

Figure 2.12 The constructed photograph of “Ricola Laufen” by Thomas Ruff from the 5th International Architecture Exhibition, Venice Biennial, 1991.
Chromogenic colour print, 153 x 295 cm.
Source: Philip Ursprung. “Visiting Thomas Ruff in Düsseldorf,” Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 159.

What is striking here is that Herzog & de Meuron preferred a constructed, in other words a non-existing image, in a platform where they have to represent both their architecture and Switzerland. Although Herzog & de Meuron argues that the reality of architecture can only be perceived through on-site experience, they represent architecture with photographs, particularly manipulated, even constructed ones. Therefore, this exhibition has a critical stance in Herzog & de Meuron’s architectural discourse; within this exhibition, besides using the immateriality of photographs to represent their architecture, the architects

[57] Ibid, pp. 23 - 158.

evaluate the object quality of photographs as equivalent to the images of the building they had envisioned. Moreover, it is also ironic that Herzog & de Meuron have appropriated the photographical technique of architectural representation that was intrinsic to Le Corbusier, whom they disagree at every turn.

Figure 2.13 (top) Gallery for a Private Collection of Modern Art, Goetz Collection. Taken as it is. By Margherita Spiluttini
Source: The official web page of the Goetz Collection: http://www.sammlung-goetz.de/ [Last Accessed: 20.11.2009]

Figure 2.14 (bottom) The constructed photograph by Thomas Ruff, Goetz Collection, Munich, 1994. Chromogenic colour print, 190 x 300 cm.
Source: Philip Ursprung. "Visiting Thomas Ruff in Düsseldorf," Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 160.

In fact, Herzog & de Meuron persistently allow Thomas Ruff to construct the image of their architecture. With respect to Philip Ursprung,[58] when Ruff's 1994-dated photograph of "Gallery for a Private Collection of Modern Art, *Goetz Collection"* is compared with the building's ordinary view above, it is clearly seen that Ruff erased the trees blocking the building's front façade. (Figure 2.13 and Figure 2.14, on page 40)

In this connection, photographs are, as Kester Rattenbury has emphasized, inherently biased; hence, they can easily be constructed in terms of technique, expression, and narration. The constructed reality of photographs, thus constructed reality (immateriality) of architecture culminates in the constructed context that the photograph becomes literally a "visual construct." Constructed photograph in effect is a critique of the literal surfaces of things and on subject matter that seems to speak for itself. For that reason, in opposition with the documentary value of architectural photography, the photograph as a visual construct can re-contextualize the theme / content depicted in the photograph.

The way in which architects work with a print of an original photograph can be considered as a darkroom intervention or equivalently the basics of Photoshop techniques of today. Whatever technique is used, photography is a medium, which has the potential to differentiate the final representation of architectural product. Swiss architectural firm Herzog & de Meuron's attitude towards photography can be given as a contemporary example together with Colomina's case on Le Corbusier. Constructed images, call for a negative criticism, in fact, triggers a new creativity. This creative enterprise is hidden in the photographic processes.

[58] Philip Ursprung has organized a recent exhibition on Herzog & de Meuron with their personal collaboration entitled "Archeology of the Mind." He is also the editor of the exhibition catalog "Herzog & de Meuron: Natural History" which is at the same time a monograph dedicated to the works of Herzog & de Meuron. Philip Ursprung is Science Foundation Professor for Art History in the department of architecture ETH. Ibid. "Exhibiting Herzog & de Meuron," p. 32.

CHAPTER 3

"BUILT IMAGES": THE PHOTOGRAPH AS A RAW MATERIAL FOR ARCHITECTURAL PRODUCTION

3.1 Art Borrowed /Architecture Adopted Prints

Based on the assumption that the photograph has a dual existence (document and creation), there is one more aspect of photography in the architectural domain. Besides from its conceptual interpretation, the term photograph refers to the printed material itself. To be precise, it is literally the physical "print" itself. Within this mere print part, the photograph adds a visual value to architecture in consideration of its potential to serve as a building material. Still, it should be reminded that the state of the art technology has enabled that potential to emerge. That is to say, printing is applied typically on fabric or paper; or on almost every material including concrete, glass, and stainless steel. Justifying this statement, as technology develops; architectural surfaces can be able to be imprinted, as well. As in the arts, printed surfaces created an unseen fashion in architecture in terms of visual styles and the aesthetization of buildings.

The physical print is significant from another point of view that this study argues that photography attributes architecture an authentic value to alter its visual material characteristics. Learning from Walter Benjamin's aura, the terms: print and authenticity are separated from each other. It has been argued that multiple, reproducible, and repetitive images can be reached by everyone, therefore, they undermine the very notion of "originality" by blurring the significance of the original. To clarify this ambivalence, the relation between a print and an architectural product should be established. Having analyzed in chapter 2 that the photograph can reveal the immaterial qualities of architecture; materiality of

the photograph as a print and its impact upon architecture will be elaborated henceforth.

The word print might suggest mechanically mass-produced commercial products, such as books, newspapers, and textile products; however, in this study, the print refers to the photograph as the material created for the use of an architect in addition to the use of conventional materials such as brick or stone. As for printmaking, it is generally defined as "an art form consisting of the production of images, usually on paper but occasionally on fabric, parchment, plastic, or other support, by various techniques of multiplication." Among those multiplication techniques, photography is most immediately affecting the development of printmaking. Photographic reproduction processes can be combined with printing methods such as relief, intaglio, and surface processes to enrich the quality of prints.[59]

Moreover, constructed images created by the potential of photography can be transferred with reproductive printmaking processes where the artist and/or architect can further process on the print to express his design. As a result, printmaking appears as a creative tool for the visual arts and architecture. As mentioned in chapter 2, the first half of the 20th century was very productive in terms of artistic experiments with photography. In this period, more prints were made and more technical innovations were introduced than in the previous times of printmaking. In this respect, prominent Pop artists such as Andy Warhol, Robert Rauschenberg and Roy Lichtenstein's printed works have a great influence on the development of architectural printing.

That is to say, art-inspired silk-screen printing technique is appropriated and further elaborated in architecture. This is because, for today, silk-screening is still the most convenient method that allows printing directly onto virtually anything - including vertical, soft, hard, or round surfaces.

[59] The major printmaking techniques are "relief printing," where the background is cut away, leaving a raised image; "intaglio printing," where the image is incised directly into the plate; "surface printing" such as lithography, where the image is painted or drawn onto a stone; and "stencil printing," where the design is cut out and printed by spraying paint or ink through the stencil.

Silk-screening is a sophisticated stencil process, developed about 1900s and first used mainly for advertising and display work. When an artist designs, makes, and prints his own stencil to produce a fine print, the process is called “screenprinting,” and the product is called a “screenprint.” About 1950s, with the emergence of Pop Art, fine artists started to use the process extensively, giving it the name “serigraphy.” Silk was the original material used for the mesh in "silk screening," but it is rarely used today in the industry/fabrication processes. Multifilament and monofilament polyester are the products used, in which monofilament is the most widespread one.

To put it simply, basic steps of screen-printing can be traced as image selecting, image processing, silkscreen burning, tracing, underpainting and silkscreen printing.[60] Accordingly, the first step in silkscreen printing process is selecting and enlarging a photographic image. The selected photograph is cropped to an intended frame and then it is transferred into a high contrast black and white image on a transparent film in a photographic studio. This transparency is called a “film positive,” which is used to burn the image onto the silk-screen. After the film positive is set, it is transferred on the silk-screen by a commercial printer. The screen mesh should be coated with a light-sensitive emulsion by that time. Once the emulsion is dry, the film positive is placed onto the silkscreen to be exposed to bright light. This procedure fixes the image onto the screen, creating a photographic stencil where an area is open for ink to be pushed through. (Figure 3.1 and Figure 3.2, on page 45)

When the photomechanical part is over, the artist can now be free to create a basic line drawing of the silkscreen image by tracing the film positive. The tracing can be transferred onto the canvas by using carbon paper and can be painted. After the layer of print is dried, the image on the silkscreen is lined up with the painted image on canvas which is called “registration.” Then ink is put onto the

[60] These steps are explained and illustrated in detail at “The Warhol Online Factory” web page: http://www.warhol.org/interactive/silkscreen/main.html [Last accessed: 11.11.2009]

silkscreen and the squeegee is dragged across the silkscreen to push ink through the open areas in the mesh of the screen.[61] (Figure 3.4, on page 46)

Figure 3.1 (top) Turning the original photograph into a film positive; image-processing.
Source: The images are captured from the flash animation at The Warhol Online Factory Web page: http://www.warhol.org/interactive/silkscreen/main.html. [Last accessed: 11.11.2009]

Figure 3.2 (middle) Preparing the stencil on the silk-screen; silk-screen burning.
Source: Ibid.

Figure 3.3 (bottom) Tracing the image from the film positive onto the canvas.
Source: Ibid.

[61] For detailed information, see "The Warhol Online Factory" web page: http://www.warhol.org/interactive/silkscreen/main.html [Last accessed: 11.11.2009]

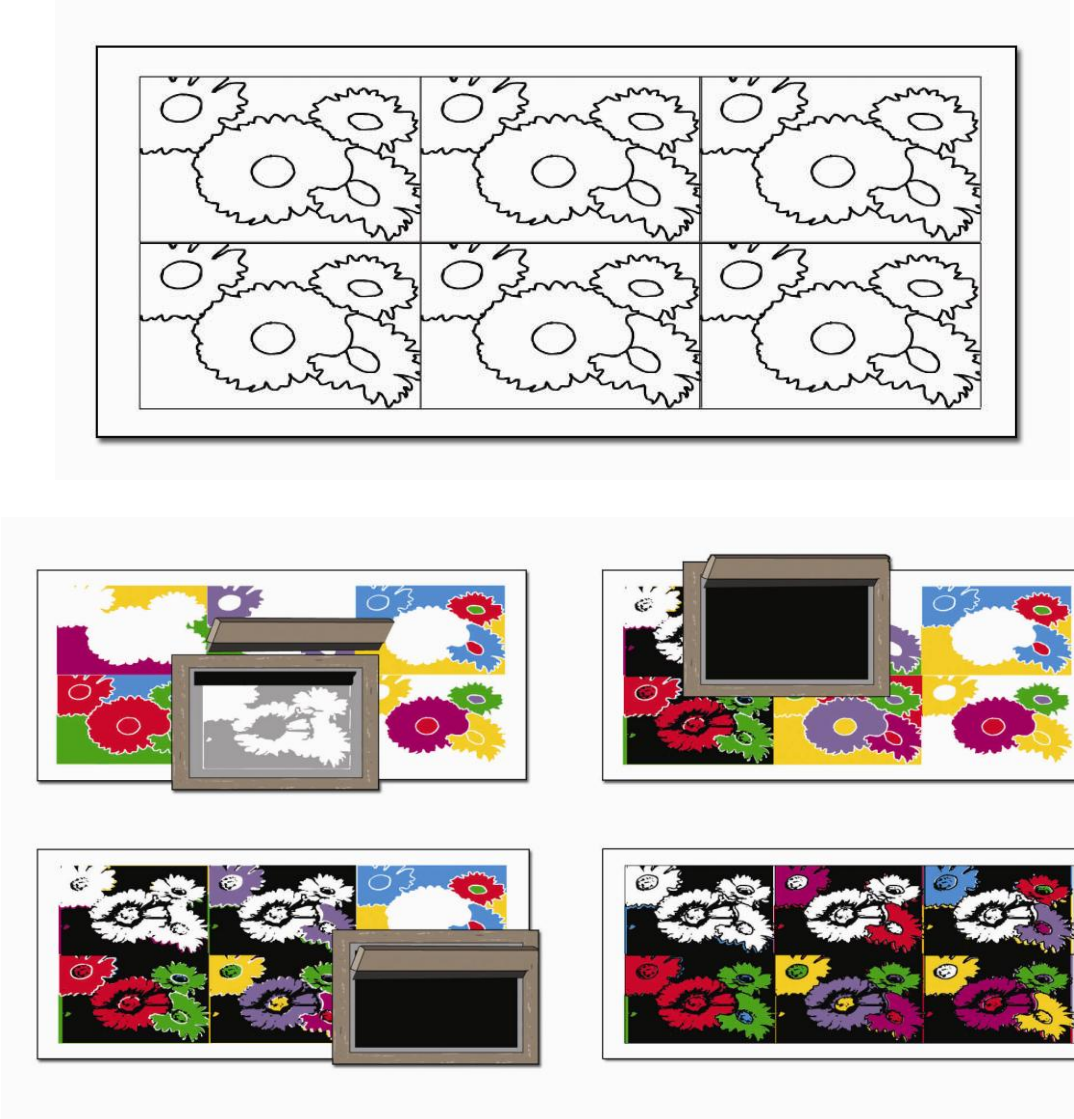

Figure 3.4 Underpainting and silkscreen printing the canvas.
Source: Ibid.

Andy Warhol (1928-1987) described the evolution of his work and his process of silk-screening as follows:

> In August '62 I started doing silk-screens. The rubber-stamp method I'd been using to repeat images suddenly seemed too homemade; I wanted something stronger that gave more of an assembly-line effect. With silk-

screening, you pick a photograph, blow it up, transfer it in glue onto silk, and then roll ink across it so the ink goes through the silk but not through the glue. That way you get the same image, slightly different each time. It was all so simple - quick and chancy. I was thrilled with it. My first experiments with screens were heads of Troy Donahue and Warren Beatty, and then when Marilyn Monroe happened to die that month, I got the idea to make screens of her beautiful face-- the first Marilyns.[62]

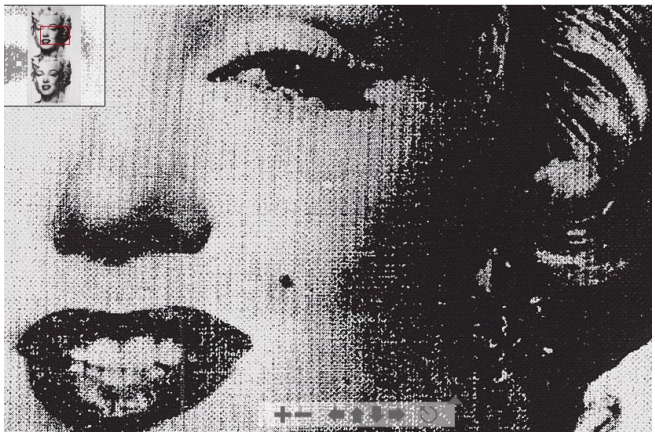

Figure 3.5 (left) Andy Warhol, Two Marilyns, 1962. Silkscreen ink and pencil on linen 26 x 14in. (66 x 35.6cm.) Source: The official web page of the Christie's: http://www.christies.com/LotFinder/ZoomImage.aspx?image=/LotFinderImages/D51282/D5128276 [last accessed: 20.11.2009]

Figure 3.6 (right) Andy Warhol, Two Marilyns, Blow up canvas detail.
Source: Ibid.

[62] See Andy Warhol and Pat Hackett, PoPism: The Warhol '60s, New York and London: Harcourt Brace Jovanovich, 1980, p. 22.

Architects did not remain indifferent to this advance in the arts. Moreover, this convention offered an insight into architects who look for inspiration and innovation in design. Philip Ursprung emphasizes that "innovative architecture proposes solutions that incorporate artistic strategies; conversely, the subject matter of art may often be articulated in relation to architectural givens."[63]

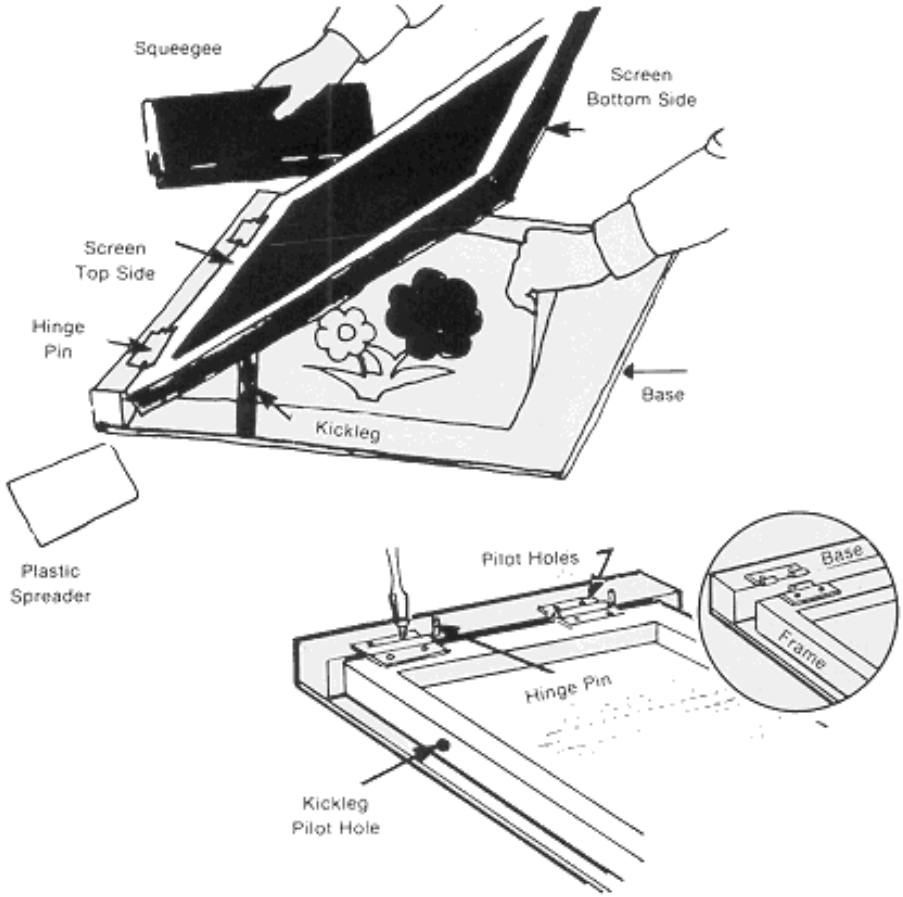

Figure 3.7 Basic Silk-Screen Printing Instructions
Source: http://www.reuels.com/reuels/Silk_Screen_Printing_Instructions.html [Last accessed: 18.10.2009]

[63] Pictures of Architecture Architecture of Pictures: A Conversation Between Jacques Herzog and Jeff Wall: Art and Architecture in Discussion, moderated by Philip Ursprung. Springer, 2004, p. 6.

In this respect, the affinity and the exchange between the arts and architecture are no doubt both important and noteworthy; because mass reproduction of photographs through new printing technologies lead a radical change in photography's conception in contemporary architecture. The photograph, which used to be perceived as a way of architectural representation seen mostly through magazines, gradually entered building interiors as a work of art - as it has become an artistic object of exhibition. Further considered as a supplementary architectural design tool, the photograph became a material in its own right, as technique suffices. Industrial printing enabled photography to be applied on paper as well as concrete, glass, or digital media. With that, architects made experiments with photography on architecture, particularly on façades. As a result, with the aid of light-sensitive solutions, any material can be printed on architectural surface materials, like a stamped print.

Nevertheless, a photograph is conventionally understood as an image to look at hand or to hang on a wall. Since it is a mass produced reproduction, photographs are mostly appeared in particular frame sizes – though artists provide their own custom-made card dimensions. In this respect, extracting the photograph from relatively small scale to paste it to an architectural surface - like printing on a concrete façade - make a difference in perception. Seeing a photograph in hand and seeing the same content on a wall surface is not the same, because all material surfaces have idiosyncratic properties. The more the graininess, the more the depth has changed. Furthermore, light reflection, color intensity, tonal texture, roughness, the absorption of ink etc. all affect the resulting image. Therefore, the photograph is no more the image as it is understood before; because, the circumstances which make the eye assess, perceive, and correlate are changed. Indeed, this situation opens further criticism and should be examined in a different discussion.

Photographs are scaled and interrelated with particular environments - within which they are encountered, such as the surface of the print, publication, space of a website, gallery, or a building façade. The change in scale suggests a change in the previously mentioned relation between the eye and the subject; therefore, scale changes the spatial conception. In this connection, the

photograph establishes a new contextual relationship according to its new scale and medium. Thus, by the transposition of the photograph from its frame to the architectural surface, the photograph is detached once again from its context and applied to another context that of architecture.

As an architectural material, the photograph is applied physically, to a new materiality. Therefore, contrary to the immaterial interpretation of photography conceptualized in chapter 2, the content of the photograph, and accordingly its subject loses its significance. For that reason, the photograph regarded as print is not assessed in terms of content; rather it is evaluated by means of the innovations it brings to the surface it is applied.

That is to say, if practically, photographic surface can be seen as an architectural surface, then the expectations that one has of the photograph differs immensely from the mediums by which the buildings are represented to the mediums from which the buildings are built. In this respect, this study argues that there is a radical transformation in architectural use of photography from immaterial application to material essence; where the photograph is now an architectural material just as brick, or stone.

However, this connection also leads to the assumption that the photograph can convey something that is not materially present in the architectural medium itself. With this respect, just as wood or steel may envelop a materiality that indicates that they are both an industrial process to become a table and that they are also unprocessed in their natural state; this study argues that the imprinted photograph may also envelope a potential as a raw material to convert architectural surfaces. With this in mind, in this study, printmaking will be regarded as the transposition of photography to architectural surface in which this transfer of surface brings along a creative potential in architectural terms. Considering this potential of photography, the following part of the study will further argue that the photograph adds an authentic value to the medium it is articulated.

3.2 From Dark Room to Industrial Printing: The Photograph as a New Architectural Material

The contemporary role of photography as a creative artifact calls for Walter Benjamin's well-known argument on the authenticity of photography in "The Work of Art in the Age of Mechanical Reproduction."[64] Writing in the 1930s, Benjamin (1892-1940) argues in his seminal essay that mechanical reproduction has blurred the value of artistic creativity and the replicas have replaced the aura generated by a work of art. In light of Benjamin's thought that "the presence of the original is the prerequisite to the concept of authenticity,"[65] many critics including John Berger[66] asserts that a photograph does not have authentic value since it has no rarity value.

Rarity should be understood in terms of originality. At this juncture, it is essential to look back Benjamin's argument on the original and the reproduction. First of all, Benjamin notes that the lens sees which the unaided eye cannot and makes obvious certain aspects of the original that would otherwise be unknowable. In other words, photographic reproduction extends the range of vision by certain mechanical processes, such as enlargement or slow motion; therefore, "photography can capture images that escape natural vision."[67]

Taking photographs in this sense is a mechanical process; yet, as for the medium itself, photography is far from being a faithful documentation tool. (It has been discussed in chapter two that the photograph can be constructed.) Technical reproduction on the other hand, as stated by Benjamin, "can put the

[64] The essay is a climax of Walter Benjamin's cultural analyses beginning from the 1930s where he examines the statue of artwork and questions the authenticity of the new mode of 19th century's representation as a mechanically reproducible medium. Ever since Benjamin's seminal essay, critics have argued the case against artistic originality and authenticity with which any record of reality can be "altered, falsified, or constructed."

[65] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," Illuminations. ed. Hannah Arendt, trans. Harry Zohn, New York; Harcourt: Brace & World, p.3.

[66] John Berger. "Understanding a Photograph," in Classic Essays on Photography, ed. Alan Trachtenberg, New Haven:Leete's Island Books, 1980, p. 291.

[67] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," Illuminations. ed. Hannah Arendt, trans. Harry Zohn, New York; Harcourt: Brace & World.

copy of the original into situations that would be out of reach for the original itself" and thereby undermines the original's "presence in time and space, and its unique existence at the place where it happens to be."[68] Notwithstanding, both processes, Benjamin claims, interfere with the authenticity of the object and severely depreciate its "authority."[69]

Seen from Benjamin's perspective, originality is associated with uniqueness. In this respect, it can be said that the introduction of the mass reproducibility of photographs can be hold responsible for the loss of aura. Reproduction is the process of mass production of identical copies by machine through photography, print technology, or electronic recording. As these processes become increasingly sophisticated, the reproduction of original works of art has reached a stage where the print has become, as Benjamin criticizes, a way to lead up to sameness. Benjamin's reading of this technical process of photography with the idea of reproduction can further be interpreted to define the terms authenticity and aura another perspective.

Having clarified in the introduction part of this study, a print – such as the one illustrated above (Figure 3.5, on page 47) – which is made by an artist is accepted to be authentic. In fact, here the authentic part is not the photo-mechanical production of print; but the artist's appropriation of that print to perform his creativity. In other words, the artist detaches the photograph from its original context and evaluates it in a new context as an artistic material. In this respect, the content of the photograph, its subject, or what it refers to is no longer an issue for him. Therefore, artists do not treat that image as a photograph, but as a fine print. In this connection, the fine print is a multiple original because the artist, from the outset, has intended to create an etching, woodcut, or other graphic work and thus has conceived his image within the possibilities and limitations of that technique. Therefore, such fine prints – like the ones belonging to the "Factory of Warhol" - are considered original works of art, even though they can

[68] Ibid.

[69] Ibid.

exist in multiple copies – because during an edition the artist destroys the stencil after a certain number of prints.

Likewise, the use of the photograph as a print in architecture is different from making an infinite number of identical prints. Architects treat the photograph as an artistic inspiration and re-contextualize it as an architectural material. Obviously, the content is again out of concern. The photograph can be shaped towards the context of the design, building, environment, and the medium it is printed. For that reason, despite the fact that the photograph is mass-produced in industrial process that inevitably makes it “a copy”; with the change in scale, context, and material; a result came up in a way Benjamin could not have anticipated.

In this respect, a novel and utterly different configuration evolves out of every process the photograph is involved. Photography enriched the content of architectural expression; it indeed characterized architectural facades. Moreover, regarded as an artifact transposed from art into architecture, the photograph can be said to change building construction processes. For this very reason that contemporary architecture has flourished with artistic themes and it acquired an innovative and conspicuous status as a frequently discussed topic in all the media.

3.2.1. A Photographical Reconsideration of Herzog & de Meuron Architecture

This new function of photography stemming from its material characteristics can be illustrated through the works of Herzog & de Meuron. Herzog & de Meuron is a Swiss architectural firm that strikes attention with their idiosyncratic way of blending architecture an art in their projects. The firm has been attracting interest with their works that are mostly involved with art and especially with their use of distinctive and original material choices. Since the 1980s, architects Jacques Herzog (1950-) and Pierre de Meuron (1950-) have designed and executed a

number of projects specifically for the arts such as Tate Modern and Laban Dance Center in London, Walker Art Center in Minneapolis, Schaulager in Basel, and Kunsthaus in Aarau. In this respect, their projects often emerge in close collaboration with artists such as Remy Zaugg, Thomas Ruff, and Adrian Schiess, with whom they have worked several times.[70]

Inspired by the arts and learning from collaborating with prominent artists, Herzog & de Meuron has elaborated photography in such a way that changed its meaning and function in architecture. For Herzog & de Meuron, it can be said that the exploration of surface is one of the principal themes of their architecture. In this connection, the Swiss architectural firm introduced photography to contemporary architecture literature as a surface treatment. Namely, the architects have treated the photograph literally as a building material. In that, architects Jacques Herzog and Pierre de Meuron's close relation with the arts by making collaborations with artists and their artistic background must have had great influence.[71] The architects treat photography as an artistic innovation transposed from art. Yet, readily Herzog & de Meuron interpret photography in architectural context learning from the artists' use of materials – such as Donald Judd. Their way of interpretation of photography paved the way for a new mode of architecture-vocabulary for the many following architects to pursue and develop.

At this point, it should be stated that the intention of highlighting Herzog & de Meuron in this thesis is due to the key role the firm plays in the functional transformation of the photograph in architecture. Still, this study is well aware that Herzog and de Meuron did not invent this architectural strategy of applied

[70] Rémy Zaugg. Architecture by Herzog & de Meuron, wall painting by Rémy Zaugg, a work for Roche Basel. Basel: Birkhäuser, 2001.

[71] Detailed information about the architects' artistic background can be learned from the books:
Philip Ursprung. Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002.
Herzog & de Meuron 1998-2002. El Croquis. 109/110, 2002. With contributions by William J. R. Curtis / Herzog & de Meuron. ISSN-No. 0212-5683
"Herzog & de Meuron 1981-2000," El Croquis. Omnibus Volume. 2. rev. and adv. ed. No. 60 + 84, 2000. With contributions by Herzog & de Meuron / Jeffrey Kipnis / Alejandro Zaera. ISBN-No. 84-88386-15-X

imagery completely, but rather generated it. The technical and expressive possibilities of applied imagery were firstly popularized in recent history by Robert Venturi's attempt to take lessons from the "iconic" environment of Las Vegas and were developed in projects by Rem Koolhaas and Jean Nouvel of the late 1980s. For instance, Jean Nouvel is one of the first architects to utilize the design potential of printed glass. In the Euralille and his competition project for the *Tour Sans Fins* in the *La Defense* arrondissement of Paris, 1989, Nouvel proposed a de-materialization of the structure by means of "screen-printed glazing."[72] Yet, it is beyond controversy that the imprint is truly made visible and become an architectural trend with the Ricola warehouse, which will be elaborated in the following part.

With this respect, in this study, the works of Herzog & de Meuron are introduced as a case to take the argument of Walter Benjamin about the authenticity of photography one step forward. For that reason, Herzog & de Meuron stand in an indicative position for the main argument of this study. Laying special emphasis on Herzog & de Meuron, hereafter, two of their renowned buildings in terms of the use of photography will be examined thoroughly.

3.2.1.1 Disintegrating the Photograph as an Architectural Unit: The Ricola Warehouse

Ricola-Europa Factory and Storage Facility, constructed in 1993, at Mulhouse-Brunstatt, France is the first built project of Herzog & de Meuron that is significant in terms of image-printed façade. In this project, besides its use as a conceptual design element, the architects interpreted the photograph as a building material for façade application. (Figure 3.8, on page 56)

[72] In detail: Building Skins: Concepts, Layers, Materials, ed. by Christian Schittich. Basel: Birkhäuser, 2001, pp.19-20.

Figure 3.8 Photograph by Margherita Spiluttini, 1994. Format: 4x5" C-Dia
Ricola-Europe SA warehouse, by Herzog & de Meuron, France.
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996:The Complete Works (Volume 3), Basel, Birkhäuser, 2005. p.28.

The repetitive order of the photo-printed acrylic panels throughout the façade strikes attention in the first place. Within this order, each panel is used as the smallest unit to create a conspicuous pattern for the translucent walls and roof of the warehouse. Integrated with artistic themes like translucency, color, and harmony; German photographer Karl Blossfeldt's (1865-1932) 1920-dated photograph of *Achillea umbellata* plant leaf (milfoil or yarrow) was printed onto the acrylic panels, which were considered as the basic unit to structure the façade.

German artist and photographer Thomas Ruff (1958-) created the botanical image, which had already existed in Blossfeldt's[73] studies, into a pattern across the building that face the entrance wall and canopy.

[73]German botanist and photographer Karl Blossfeldt's entire photographic output is devoted to plant parts: twig ends, seed pods, tendrils, leaf buds, etc. He photographed close-ups in different scale against stark backgrounds.

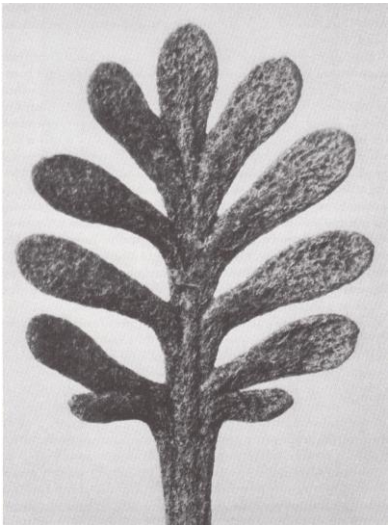

Figure 3.9 (left) Photograph by Karl Blossfeldt, Leaf of *Achillea umbellate*, enlarged 30 times, 1928.
Source: Philip Ursprung. Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p.300.

Figure 3.10 (right) Silkscreen ink, polycarbonate and aluminum panel by Thomas Ruff. 200 x 203 x 4 cm, The Museum of Modern Art, New York.
Source: Ibid, p. 250.

Furthermore, here I claim that an analogy can be drawn between the repetitive units in Andy Wahol's works and the way Blossfeldt's image is used by Herzog & de Meuron for the building. Indeed, Ruff's leaf pattern and Herzog & de Meuron's screen-printing of it in a repetitive order also technically reminds Andy Warhol's previously defined serial paintings.

> A silk-screened image is flat, and without depth or volume. This perfectly suited Warhol because in painting Marilyn Monroe he wasn't painting a woman of flesh, blood, and psychological complexity but a publicity photograph of a commodity created in a Hollywood studio. As Colin Clark's anecdote suggests, you can't look at Warhol's Marilyn in the same way that you look at a painting by Rembrandt or Titian because Warhol isn't interested in any of the things those artists were—the representation of material reality, the exploration of character, or the creation of pictorial illusion.[74]

[74] Richard Dorment. "What Is an Andy Warhol?,"
Retrieved: http://www.nybooks.com/articles/23153. [last accessed: 12.10.2009]

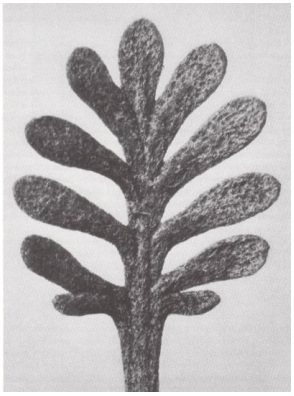

Figure 3.11 (top left) Karl Blossfeldt's Leaf of *Achillea umbellate*, 1928.
Source: Philip Ursprung. Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p.300.

Figure 3.12 (top right) Andy Warhol, Campbell's Soup Can, 1962.
20 x 16" (50.8 x 40.6 cm) Source: The Museum of Modern Art Exhibitions and The Collection Web page: http://www.moma.org/collection/browse_results.php?object_id=79809 [Last accessed: 14.08.2009.]

Figure 3.13 (bottom left) A section of Thomas Ruff's motif, based on Blossfeldt's leaf, as an operating pattern on Herzog & de Meuron's Ricola warehouse.
Source: Photograph taken by Pieter Rolies, 2005, posted at the online sharing portfolio: http://www.danda.be/gallery/ricola/3/ [last accessed: 14.08.2009]

Figure 3.14 (bottom right) Andy Warhol, "100 Campbell Soup Cans," 1962.
82x52" non-mechanized silkscreen process.
Source: http://www.nallegheny.k12.pa.us/academics/Art/Painting/stillife/100Cans.html [last accessed: 14.08.2009.]

As in the series of Andy Warhol this repetitive juxtaposition of a number of the same images leads an unpredictable textural effect. As scale gets smaller, human eye sees the big picture as one complicated texture instead of the hundreds of identical prints one by one. Thus, it can be said that the repeating pattern transformed the façade into a work of art justifying the debates that Herzog & de Meuron architecture stands in a blending position in-between architecture and art.

Figure 3.15 View of the leaf pattern from the interior of the Ricola Warehouse
Photograph by Margherita Spiluttini, 1994. Format: 4x5" C-Dia
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996:The Complete Works (Volume 3), Basel, Birkhäuser, 2005. p.35.

Figure 3.16 (left) The function of the building is stacking inside.
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996:The Complete Works (Volume 3), Basel, Birkhäuser, 2005. p.35.

Figure 3.17 (right) Thus a repetitive pattern is conceptualized as a theme outside. Photograph by Margherita Spiluttini, 1994. Format: 4x5" C-Dia
Source: The official website of Margherita Spiluttini Architectural Photography: http://www.spiluttini.com/frame.php?lang_id=en [Last access: 14.11.2008]

The professional relation with Herzog & de Meuron and the Ricola firm date back to the late 1970s. The owner of Ricola candies Alfred Richterich, who is indeed an art collector and former artist, is one of Herzog & de Meuron's earliest clients.[75] In this respect, Herzog & de Meuron might have been attributed a

[75] For Philip Ursprung, the relationship with Alfred Richterich is also the first of many inspirational discussions about architecture and art. Ursprung has briefly indicated that after the firm bought a quarry on the edge of Laufen in 1962, one after the other, different facilities were built or developed in existing buildings converted to new uses. Construction in the former quarry includes various facilities (1962-66), a new factory (1967), a warehouse and a canteen (1972-73), an extension to the factory with a sugar warehouse (1978), and a loading bay, a laboratory, offices, and a presentation room (1980).

conceptual meaning involving the function of the building, the history of the company brand, and the process of construction. The plant motif is chosen as an “allusion” to the herbal candies produced by the Ricola firm. Moreover, as the firm demands a storage building, stacking seems to be conceptualized as a theme for it. In this connection, it can be speculated that the function of the building is stacking inside, thus a repetitive pattern is conceptualized as a theme outside. (Figure 3.16 and Figure 3.17, on page 60)

Figure 3.18 Site photographs of the Ricola Warehouse, Herzog & de Meuron, 1993.
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996:The Complete Works (Volume 3), Basel, Birkhäuser, 2005. pp. 34-5.

For detailed information about the Ricola buildings, see Philip Ursprung. “Visiting Alfred Richterich in Laufen,” Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 169.

In fact, the chosen photograph to envelop the building should not have crucial importance. Because, as it can be clearly seen in the construction photographs of the site, the photograph printed on the façade in the end is viewed as a regular building material. (Figure 3.18, on page 61)) Therefore, its content mostly does not make any difference in its conception. As indicated in Ursprung's interview, Richterich affirms that the company's interest in architecture is of little concern to its customers.[76]

Moreover, Philip Ursprung indicates the connection Karl Blossfeldt and Thomas Ruff as follows:

> With his photographs of greatly enlarged plant details, standing alone and usually symmetrical against a neutral background, Blossfeldt is generally regarded as one of the main exponents of **"***Neue Sachlichkeit*" ("New Objectivity") in German photography and is often cited in the same breath as Albert Renger-Patzsch and August Sander. His inventory of plant forms is in keeping with the rigorous, factual photography of modernism which was so important to the photographers who successfully established the so-called Düsseldorf School, including Thomas Ruff. Few are aware that Blossfeldt was in fact a sculptor. His photographs were made in the context of a major commission to assemble a collection of plants for study purposes – dried, modeled in plaster and bronze, and as photographic enlargements.[77]

Blossfeldt's works are crucial from the point that they are characterized by sharply defined imagery, especially of objects removed from their actual context. In the period following the World War I in Europe, this approach of favoring extremely sharp definition was introduced as *Neue Sachlichkeit* ("New Objectivity").

The clear-cut lines and bold effects of this style—variously called the "New Objectivity," the "new vision,"—was a reflection, perhaps, of the overarching role of the industry and technology during the 1920s.[78] Blossfeldt made highly

[76] Ibid. "Visiting Alfred Richterich in Laufen," p. 171.

[77] Ibid. "Models of a Hidden Geometry of Nature: Karl Blossfeldt's 'Meurer Bronzes'," p. 301-3.

[78] For more information visit the Online Encyclopedia Britannica web page: http://www.britannica.com/EBchecked/topic/410437/Neue-Sachlichkeit [last accessed: 12.11.2009]

defined close-ups of plants by intentionally removing them from their natural habitat. “His images featured strong design components and stressed the materiality of substances rather than the maker’s emotional attitude toward the subject. Blossfeldt believed that the final image should exist in all its completeness before the exposure was made and that it should be an un-manipulated record.”[79]

In fact, the German artist-craftsman Karl Blossfeldt is an important figure for Herzog & de Meuron. Blossfeldt’s plant photographs have recurred many times throughout the work of Herzog & de Meuron. Certainly, the best-known example is this renowned plant motif covering the storage building with a grid-like pattern. Yet, as Ursprung indicates, years earlier, images by Blossfeldt had already appeared on the first drawings or Herzog & de Meuron for the Frei Photographic Studio in Weil am Rhein. However, plant motifs did not figure in the project in its final from. Once again, as Ursprung notes:

> In the architects’ submission for the competition to design a Library and Masterplan of Cottbus Technical University, there is notably a passing reference to Blossfeldt: in one drawing we read *“Blossfeldt im Café”* and in an architect’s projection of the same scheme, the façade bears a neon sign that inscribes “*Blossfeldt im Foyer.*” In both cases it seems a fictive exhibition is being advertised, as it were implying that it would be a good idea to put on an exhibition of photographs by Blossfeldt in a university library designed by Herzog & de Meuron.[80]

In fact, this photograph of Blossfeldt is perfectly suitable for the concept of the building with its out of depth, elevation-like straight look and details – regarding New Objectivity.

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[79] Ibid.

[80] Philip Ursprung. “Models of a Hidden Geometry of Nature: Karl Blossfeldt’s ‘Meurer Bronzes’,” Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 301.
For Herzog & de Meuron, architectural continuity is crucial. In this respect, the architects set ground for further projects by experimenting on themes such as scale, transparency, and material characteristics in their current works. With this in mind, the exhibition discussed in chapter 4 is of great importance since it is apparent that they have been thinking on this effect of photographs back then.

After the building is completed, the difference between the original photograph and its interpretation on the building can be seen apparently. It can no more be argued that the covering on the building is a photograph in the common sense. Far from immateriality, it is now completely an architectural building material. In fact, the photograph does not turn out to be an ordinary material, since its material characteristics are blended with the acrylic material of the panel and atmospheric conditions, its materiality changes depending on specific circumstances. Accordingly, the photographic effect changes according to daylight and night, weather and nature, reflection, emptiness, absence-presence, while workers in it and as well as from the inside to the outside. (Figure 3.19 and Figure 3.20, on page 65)

The experimentation of the photographical effects on the translucent façade of the Ricola warehouse results in an exceptional outcome of material characteristics. The architects together with the artist Thomas Ruff have raised that potential further with creativity and has treated the façade like a multiple canvas of Warhol. Likewise, the photograph is de-materialized; its content, how that photograph was taken, its being constructed or not is not essential. The photograph should be conceived freed from its previous context, and can be re-contextualized according to the newly applied medium. (Re-contextualization of the photograph will be elaborated in chapter 4.)

In this respect, one can understand the idea behind the process of disintegrating a façade with the use of photographs. Herzog & de Meuron explore how assemblage is a carrier of content and seeks to enhance a general awareness of this relation. At first glance, it can be said that Herzog & de Meuron have characterized the building by decomposing a sample image and then recomposing it. In fact, the architects create an authenticity within a building by fragmenting it into separate parts (whether or not these are arranged in hierarchal order) or by simply adding the different parts together.

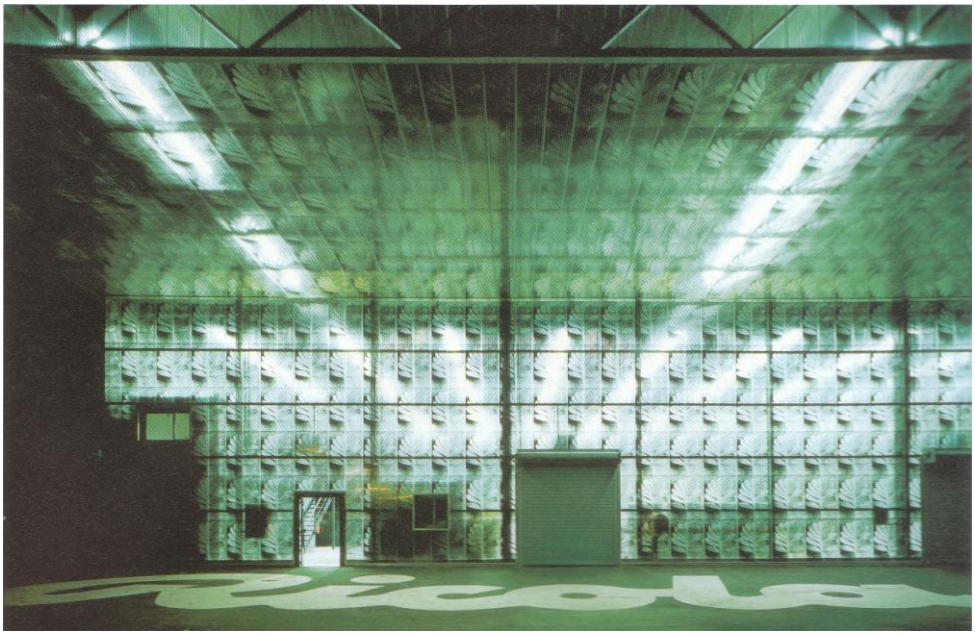

Figure 3.19 (top) Photographic effect of the façade changes according to daylight. Photograph by Margherita Spiluttini, 1994. Format: 4x5" C-Dia
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996:The Complete Works (Volume 3), Basel, Birkhäuser, 2005. p.34.

Figure 3.20 (bottom) Photographic effect changes according to fluorescent light. Photograph by Margherita Spiluttini, 1994. Format: 4x5" C-Dia
Source: Ibid, p.33.

In the publication “A Matter of Art: Contemporary Architecture in Switzerland,” which accompanies an exhibition reconsidering the current architectural scene in Switzerland, it is commented that:

> What Herzog & de Meuron does is possibly all about defining a Gestalt - a shape that tends to close in on itself but never completely. This shape enmeshes external space that it appropriates, interiorizing the exterior, with the outside being intricately interwoven with the inside. In the final analysis, it is a shape that forms one whole but at the same time contains tensions arising from a host of contradictory needs.[81]

Perhaps, this attempt is to create characteristic shapes; to create something that is recognizable; stick in the mind, and something that can serve for both the specific functional needs and spatial interaction in an urban context. Nevertheless, it is a fact that Herzog and de Meuron have developed characteristically inventive use of screen-printing. Still, such articulation of buildings is also a challenge to Adolf Loos's structures which reflect his conceptualization on ornament as crime.

3.3.1.2. Re-structuring the Photograph as a Building Material: Eberswalde Library

Designed in collaboration once more with the artist Thomas Ruff, the Eberswalde Technical School Library near Berlin can be regarded as one of Herzog & de Meuron’s most striking designs carrying the idea of a pictorial facade further than any other Herzog & de Meuron project. (Figure 3.21, on page 67)

[81] A Matter of Art: Contemporary Architecture in Switzerland, Birkhäuser Basel, 2001, p.132.

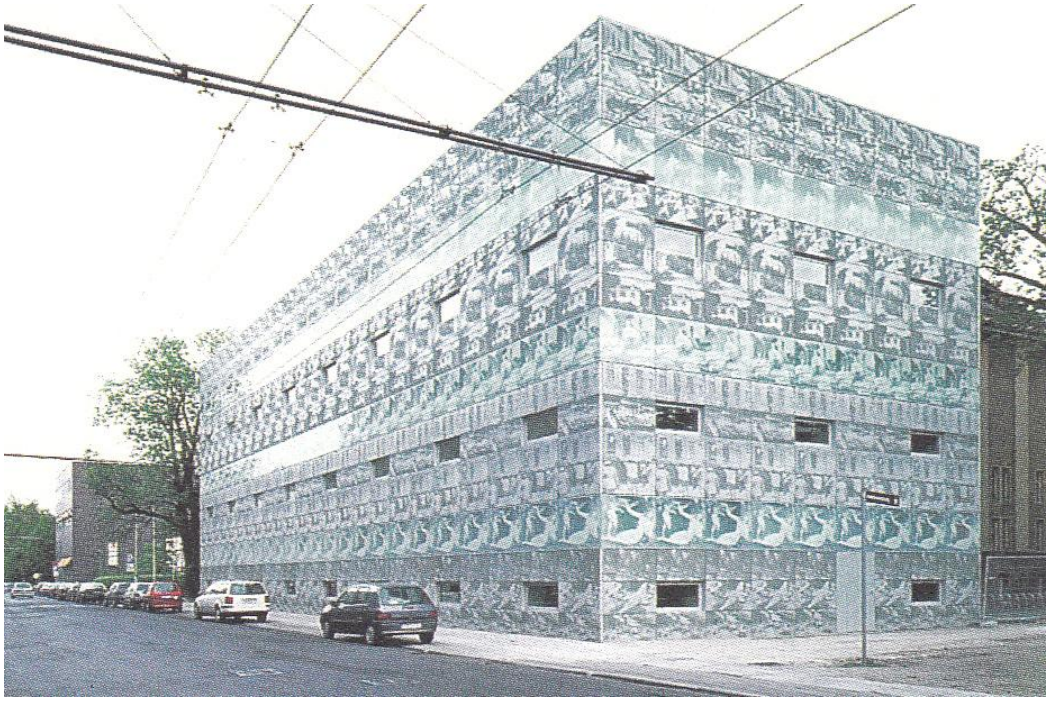

Figure 3.21 Photograph by Margherita Spiluttini, 1999, "Eberswalde Library" Herzog & de Meuron, 1999, Germany.

Source: Philip Ursprung. "Pieces for Four and More Hands," Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 56.

It has been stated that Herzog & de Meuron have been experimenting artistically on special materials from the initial idea to their construction phase. Since their first project, the firm has combined traditional materials with modern building techniques under substantial themes. Thus, taking advantage of the experience they have gained in the exhibition *Architektur Denkform,* - the exhibition will be analyzed in chapter 4 – and the previously mentioned warehouse of Ricola, Herzog & de Meuron have utilized once more the potential of photography and transparency in 1999 with their library building in Eberswalde, Germany. Further expanding the effect of photographical integration they have managed in the Ricola warehouse, the architects enabled the transfer of photography completely onto the façade both literally as a functional building material and as an ornament.

The type of process used for the transference of photographs onto the building surface resembles to “photoengraving,” which is one of the most intriguing concrete finishing technologies emerged in recent years. As the process is defined in the book “Liquid Stone”:

> Photoengraved concrete is produced through a process that is somewhat reminiscent of silk screening. A photographic image is applied as a layer of tiny dots onto a polystyrene sheet, but instead of paint or ink, the image is "printed" with a cure retarder-a chemical that slows the cure rate of concrete. The plastic sheet is placed into a concrete mold and the concrete is poured on top of the sheet. After the concrete sets, it is removed from the mold and pressure-washed, revealing a half-tone -like image reflecting the differential cure rates of the concrete surface.[82]

As it is understood, the method of printing a photograph onto concrete is more refined than a stamped print or the application of the leaf pattern in the Ricola warehouse. Derived from the material characteristics of concrete, the architects have to experiment and control the drying times of concrete by trial and error, for the clarity of the printed images, just like a photographer develops the image in the dark room – namely the test print.

Figure 3.22 (left) Photographs by Herzog & de Meuron, 1998.
The unset surfaces of the concrete are sprayed out.
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996 : The Complete Works, Basel, Birkhäuser, 2005. p.77.
Figure 3.23 (right) Imprinted panels and print patterns.
Source: Ibid.

[82] Liquid Stone: New Architecture in Concrete, ed. by Jean-Louis Cohen and G. Martin Moeller, Jr., Basel: Birkhäuser, 2006, p. 150.

In particular, applying an image to glass is simply achieved by silk-screen printing. For Gerhard Mack, applying an image to concrete is analogous to graffiti and a more complex hybrid process of *sgraffito.*[83] Mack writes:

> The photographs are transferred on to a special plastic film by means of a silk-screen process, using a cure-retardant instead of ink. The printed film is then placed into the formwork (taking care to avoid any slippage) and concrete poured over it. The amount of retardant used controls the degree to which the surface of the concrete sets. When the panel is taken out of the form work, and carefully washed with water and brushes, the concrete that has lain in contact with the retardant remains liquid and is rinsed away, leaving darker, rougher areas of exposed grey aggregate.[84]

Figure 3.24 (left) Photographs by Herzog & de Meuron, 1998.
First attempts at concrete printing by Herzog & de Meuron.
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996 : The Complete Works, Basel, Birkhäuser, 2005. p.77.

Figure 3.25 (right) Photographs by Herzog & de Meuron, 1998.
Silkscreen foil and concrete are poured into moulds.
Source: Ibid.

[83] As Jonathan Hill has underlined in his book "Immaterial Architecture" where he discusses the concepts that align architecture with the immaterial by means of design of spaces and surfaces, the term 'graffiti' derives from *sgraffito*. Hill argues that graffiti and *sgraffito* ornament a building by placing one layer over another in order to obscure the part lying beneath.
See Jonathan Hill. Immaterial Architecture, New York, Routledge, 2006, p. 176.

[84] Valeria Liebermann. Eberswalde Library: Herzog & de Meuron, AA Publications, 2004, p.22.

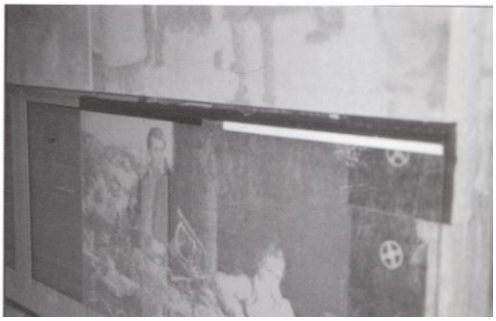

Figure 3.26 (left) Photographs by Herzog & de Meuron, 1998.
Imprinted glass and concrete panels in the warehouse.
Source: Gerhard Mack. Herzog & de Meuron, 1992-1996 : The Complete Works, Basel, Birkhäuser, 2005. p.77.

Figure 3.27 (right) Photographs by Herzog & de Meuron, 1998.
Pattern on an imprinted glass panel.
Source: Ibid.

Original photographs were taken from Thomas Ruff's personal archive. (see Appendix A) Then, as has been previously described above, they were transformed into film positives, and then into print patterns. As it is seen, photographs were transferred by a special "serilith" process. Serigraphing the glass and in a way lithographing[85] the concrete, creates a fascinating textile continuity between the materials covering the library. Luis Fernandez-Galiano (1950-) describes that continuity as if the volume of the library "dissolves in the vibration of the reiterated tattoo of the skin." Although the surface can be described as a "tattooed skin," the result is perceptually more like a "translucent veil," as Herzog & de Meuron have managed to achieve in the exhibition *Architektur Denkform*.

[85] "Printed matter," whether in the form of light on photographic emulsion or ink on paper, is one of the principal interests of Herzog & de Meuron. Lithography (literally "stone writing"), invented in 1796, was the first form of printing that allowed cheap and rapid reproduction in virtually unlimited quantity. This truly epochal invention might have inspired the famous notion of "the book killing the building" in book five of Victor Hugo's *Notre-Dame de Paris* (1831). If the medium of lithography "killed the building," has the building (i.e. architecture) ever been able to strike back? "In fact, architecture has never been able to respond to this challenge by literature and has never returned to its predominant position."
See Philip Ursprung. "Imprints and Moulds," Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 256.

Particularly, the building is a three storey rectangular volume, clad in glass and prefabricated concrete panels – in a comparable manner to the claddings of Adolf Loos. Each panel displays a photograph; and panels on the same layer have been thematically printed alike. To be more precise, photographic images are repeated horizontally sixty-six times, like a film reel, forming bands that wrap around the building.[86] There are seventeen rows of panels in the vertical direction showing a total of 13 different photographs. The photographs depicted can differ in size, number, and location in each other; for instance, the one on top is an enlarged cropping from the lowest photograph.[87]

Thus, the irregular rhythm of the horizontal bands of images, of varying heights obscures the regular rhythm of the floor plates and window bands. The elevation of the library has a clearly separated structure, and in particular, I claim that it reminds an order of a familiar façade; the Renaissance façades of Leon Battista Alberti (1404-1472). This might have been Herzog & de Meuron's attempt to blend traditional techniques within their innovative attitude. Thus, Herzog & de Meuron reinterpreted a familiar classical façade from history and superimposed it with their own style - in fact, in a rather postmodern, eclectic attitude.

If the purpose of a university library is to make knowledge accessible, Eberswalde library visualizes it with the images extracted from the periodic sequences on historical, cultural, scientific or political subjects. As mentioned above, Thomas Ruff has selected photographs that refer to Germany's recent history and the library's purpose, content, use and location; or as for Jonathan Hill, the photographs are selected to encourage debate on the relationship between the building's exterior and interior.[88] (see Appendix A)

The library is located next to the German Institute of Entomology, which was once the world's leading center for insect research. Thus, Ruff chose the image

[86] Jonathan Hill. Immaterial Architecture, New York, Routledge, 2006, pp. 178-9.

[87] Surface Consciousness, ed. by Mark Taylor. London : Academy Editions, 2003. p. 47.

[88] Jonathan Hill. Immaterial Architecture, New York, Routledge, 2006, pp. 178-9.

of an insect for the façade of the library in homage to the building's once famous neighbor.[89] Ursuprung defines the images as follows:

> Various individual subjects are shown, some everyday in nature, others historically significant. Ruff calls the pictures extremely "robust." […] Read vertically, even bands of concrete slabs alternate with somewhat taller glass panes, repeating the photograph on only the lowest and the highest tiers, while scrolling through the entire repertoire of images. These images carry a considerable charge far from the august portraits the architects had in mind a few years earlier for the libraries project for the Université de Jussieu in Paris. The three tiers of glass panes alternating with those of concrete carry translucent images of Venus, a *memento mori,* and a double portrait of Alexander von Humboldt and his assistant Aimé Bonpland. In contrast to the others, these three represent paintings. Despite repeated cropping first by newspaper editors and then by the artist, they have lost none of their expressive impact. Nevertheless the client was vehemently opposed to the use of certain motifs: Brezhnev sitting on a bench next to Nixon apparently still triggers so many associations that it could not be permitted to appear on the library façade. The image of Bernauerstrasse, showing people in East Berlin climbing out of windows in an attempt to escape to the West, was only grudgingly tolerated. [90]

As Jonathan Hill has pointed out, many of the photographs on the façade are iconic images for the inhabitants of Eberswalde. Exemplifying on the one hand, the photograph in the appendix A (Figure A.2, Figure A.7 and Figure A.9) documenting both the construction of the Berlin Wall and an escape attempt, and, a further non-printed photograph depicting the demise of Nazi Germany women's relay team at the 1936 Berlin Olympics on the other; Hill defines Ruff's sgraffito-graffiti as a "subversive and disruptive tool for public debate."[91] In view of that, the rejection of the printing of the second photograph onto the façade is understandable in response to local criticism.

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[89] As Philip Ursprung has explained, the institute formerly located in Berlin at the turn of the century, and was moved to Eberswalde in the 1930s after it went into decline. It remained operational during the years of the German Democratic Republic but ceased to be state funded in the 1990s. Now privately supported, it remains open to the public today. Yet virtually nothing of what was once the largest entomological collection in the world has survived.
Philip Ursprung. "Stacking and Compression," Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 198.

[90] Ibid. "Pieces For Four and More Hands,"p. 56-58.

[91] Jonathan Hill. Immaterial Architecture, New York, Routledge, 2006, pp. 179.

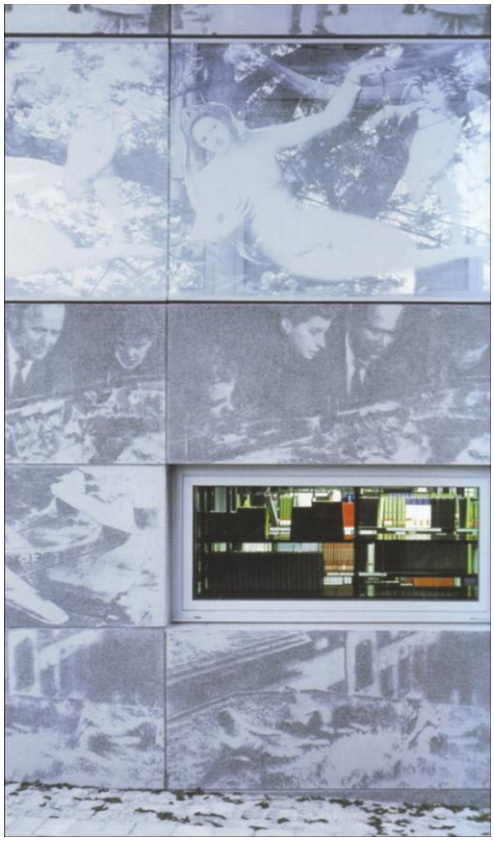

Figure 3.28 (left) Eberswalde Library, façade detail.
Source: Liquid Stone: New Architecture in Concrete, ed. by Jean-Louis Cohen and G. Martin Moeller, Jr., Basel: Birkhäuser, 2006, p. 152.

Figure 3.29 (top right) Eberswalde Library, interior detail
Source: Photograph posted on 3.12.2004 to the online encyclopedia "Wikipedia" (Deutsch): http://de.wikipedia.org/wiki/Bibliothek_der_Fachhochschule_Eberswalde [last accessed: 7.11.2009]

Figure 3.30 (bottom right) Eberswalde Library, exterior
Source: Ibid. Photograph posted by Ralf Roletschek on 9.12.2004.

In this respect, one might argue that the combination of these still images represent a story or narrate the immaterial. In fact, the sense of conceptualization might be felt more in the Eberswalde library than the Ricola warehouse, since the façade of the library is like a filmstrip instead of a full grid

pattern composed of identical images. However, although the focus is on the surface, the iconographic position of the images is neither the concern of this study, nor was Herzog & de Meuron's. As a building material, the architects did not consider photograph's representational quality. In fact, as stated before, one of the key terms of discussing the photograph as a material is to ignore its immaterial values. In this sense, Hill further comments that Ruff's principal concern was not the photograph as a means of communication as he quotes Ruff's phrase: "Without text, the picture is only a picture and not information. You can't pigeonhole it. It is suspended in a vacuum."[92] Indeed, the by-passer cannot recognize that message. Gerhard Mack, too, implies that Herzog & de Meuron neglect that scenario. As noted in the case of the Ricola warehouse, architect's contribution most of the time cannot be observed by users.

In a comparable manner with the Ricola warehouse, the material characteristics of the library building combined with photographic and atmospheric effects can be observed clearly. Dependent on the viewpoint and daily atmospheric conditions, the alternating effects achieved by the imprints are also enhanced by the light use of the building.

If Figure 3.21 is compared with Figure 3.31 below, it is apparently seen that during the daytime the printed areas give the façade a rather unified look by merging the concrete slabs and the glass panels into a uniform skin; while at night due to interior lighting, they "separate into thematic bands". In other words, the imprinted areas on the windows become "positive," since the daylight lights up them. However, at night, they become the "negative," since the light comes from the inside of the building. Furthermore, "whilst seen from an acute angle, or in the rain, the images appear sharper, like lead-type newspaper printing plates."[93]

[92] Thomas Ruff. "I Make My Picture on the Surface", ibid. p.163.

[93] Richard Weston. Materials, Form And Architecture, Yale University Press, 2003, p.222.

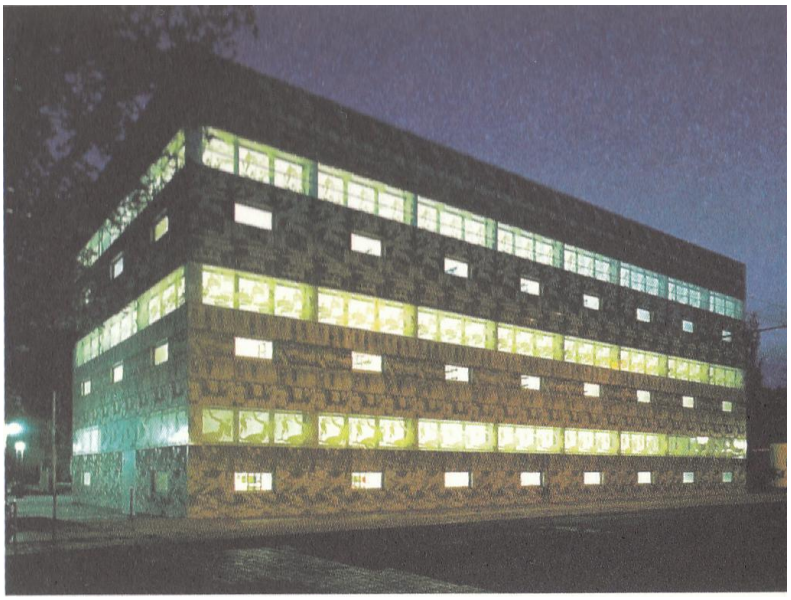

Figure 3.31 Eberswalde Library at night. Photograph by Margherita Spiluttini, 1999.
Source: Philip Ursprung. "Pieces for Four and More Hands," Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 60.

By the same token, the concept of the layered façade of the library can be said to be inspired of stacking as it was in the Ricola warehouse. Since the building functions as a library, Urpsrung argues that Herzog & de Meuron might have been matched the principle of stacking, in horizontal bands, with that of floating images, imprinted on glass panes and concrete slabs.

Nevertheless, what makes the building so powerful does not related so much to the iconographic message, but the photographic effect on concrete and glass that breaks the first impression of an ordinary curtain wall system. Certainly, the photographical impact on glass and concrete is utterly different. Looking through glass is a subjective experience that two pictures fuse into one, as it will be defined in chapter 4 regarding the exhibition *Architektur Denkform*. Despite it is defined in the book "Building Skins" that at close range the glass is almost

polished in appearance, while the concrete is restrainedly dull,[94] at first glance, it appears that glass and concrete are treated the same and from a distance, these materials are difficult to tell apart. Yet, the merit and potential of these unique qualities are not inherited in the articulation of the material characteristics of glass and concrete alone. The imprinted photograph is merged with glass and concrete in such an authentic way that the images have less definition and contrast than the originals, thus they actually look like printed artworks. The result is a building that is also a massive work of Pop Art, "simultaneously suggesting depth on a flat plane and movement on a stationary surface."[95]

Indeed, the reference to Andy Warhol's "screen prints" is more than evident. In fact, the architects often cite Warhol's work as an artistic influence for their architecture. As stated by the architects, the silk-screened images are treated like alternative bands of windows / fuzzily printed photographic images on bare concrete. As a result, the building with an expressive façade creates its own spatiality that it resembles a work of art more than a building.

By treating the façade like a paper print, its form is separated into its elementary parts, which are in this case replaced by photographs of particular scenes. In this context, it can be argued that the photo-prints on the cladding of the library, cover the whole building and to a certain extent de-materialize it. The ornamentation is so characterized that concrete and glass do not seem to exist anymore. By the repetition of the same image, each volume receives a regular structure. But not only do material and photographs merge inextricably; the body of the building can no longer be distinguished from the pictorial surface. In the end, the simple geometrical form of the building is converted into a semi-translucent, complicated row of images. Regarding of transparency and translucency, the photograph, as a building material, offers a special interlayer between outer and inner space of the library. Therefore, the library literally

[94] In detail: Building Skins: Concepts, Layers, Materials, ed. by Christian Schittich. Basel: Birkhäuser, 2001, p.24.

[95] Liquid Stone: New Architecture in Concrete, ed. by Jean-Louis Cohen and G. Martin Moeller, Jr., Basel: Birkhäuser, 2006, p. 150.

explores the relationships between immaterial and material by combining photograph's visuality with construction techniques.

Having analyzed Herzog &de Meuron's buildings, it can be said that the architects have a characteristic way of converting simple, box-like designs into striking architectural edifices with the aid of photographs. In fact, this approach resembles in one particular way to the constructivist approach. (See Appendix B) I claim that the architects create a new perspective from a box just as Alexander Rodchenko creates unusual vantage points or László Moholy-Nagy experiments on the photogram. In fact, the technique used here almost resembles to the making of a photogram. (See Appendix B)

Still, as the German architectural critic Gerhard Mack indicates, to certain point there is a contemporary reaction to the 1908-dated article of Adolf Loos: "Ornament and Crime". Loos argues that the evolution of culture is synonymous with the removal of ornament from objects of daily use.[96] It can be argued that the library in Eberswalde is the most radical form of a decorated box.[97] However, Jacques Herzog and Pierre de Meuron readily admit that their interest in ornament is a direct critique of Loos's[98] "unadorned modernism."[99] In contrast to

[96] Adolf Loos, Ornament and Crime, Ariadne Press, 1997, p. 100. Quoted from Jonathan Hill. Immaterial Architecture, New York, Routledge, 2006, pp. 178-9.
See also Patterns in Design, Art and Architecture, ed. by Petra Schmidt, Annette Tietenberg, Ralf Wollheim. Basel: Birkhäuser, 2005. p. 12.

[97] In detail: Building Skins: Concepts, Layers, Materials, ed. by Christian Schittich. Basel: Birkhäuser, 2001, p.24.

[98] "From Loos's viewpoint, art and ornamentation hence serve the same purpose, even if they direct themselves at different circles: they allow people to enjoy themselves and their environment as aesthetic constructions, as inventions. Art and ornamentation are, accordingly, both visible signs of individuality, and the singularity of the self shines through all the more brightly, the more the world of utility goods acknowledges, by contrast, the uniformity of mechanical aesthetics."
See See also Patterns in Design, Art and Architecture, ed. by Petra Schmidt, Annette Tietenberg, Ralf Wollheim. Basel: Birkhäuser, 2005, p. 9.

[99] Valeria Liebermann. Eberswalde Library: Herzog & de Meuron, AA Publications, 2004, p.38.

Loos, Herzog & de Meuron looked up to Gottfried Semper[100] as an advocate of adornment. Notably, Semper is the architect of the main building and first dean of the architecture school at the ETH (Federal Institute of Technology) in Zurich, where Herzog and de Meuron studied and argued for the revival of *sgraffito*.[101] Herzog & de Meuron states at this point:

> We would like to use the decoration very precisely. We use it in the form of printing on or corrosion on glass, concrete or stone and analyze thereby the familiar character of these materials and win them again as building materials.

In this context, it can be said that Herzog & de Meuron convert the immaterial expression of the building as a means into a contemporary photographical language of architecture where these images are used as functional ornaments.

3.2.2. GlassJet: A New understanding of Architectural Print as a Production Technique

This new function of the photograph has advanced rapidly with the aid of technology towards the 21st century. In fact, today there is no need for the architect to experiment the effects of a photographical façade. Most manufacturers offer their own printable surface solutions such as the one applied

[100] In 1986, in The Principle of Cladding. ed. by Max Risselada, 010 Uitgeverij, 2008, pp. 170-3, Loos accepts Semper's assumption that architecture originates in the surface dressing not the structure to which it is applied. (pp.66-7) Loos states that "surface should differ from structure because each material has its own formal language," a principle again evolved from Semper. According to Loos, materials should express nothing but themselves. Consequently, he rejects ornaments. Associating ornamentation with all that he considers negative, Loos promotes appreciation of the intrinsic qualities of unadorned materials, a principle familiar in modernism. The onyx wall at the centre of Mies' Barcelona Pavilion is a noted example. Loos assumes that a surface is not an ornament if it is independent of the structure and applied without transformation. But ornamentation is not absent from modernism. Often the material is itself the ornament. See Jonathan Hill. Immaterial Architecture, New York, Routledge, 2006, p. 177.

[101] Ibid.

on the Municipal Bank of Eiserfeld, Germany. The firm releases innovative glass-processing solutions with its newly developed “GlassJet” technology.[102]

Accordingly, the bank’s glass façade is imprinted with an industrial on-glass digital printer that uses a computer inkjet printing method with solvent-based ceramic inks. Worthy of its cutting edge technology, a satellite image of the town and its surrounding is imprinted.

Figure 3.32 DIP Tech’s GlassJet™, the first line of industrial on-glass digital printers, The process of screen-printing
Source: The webpage of DIP Tech Digital Printing Technologies: http://www.dip-tech.com/ lLast accessed: 22.11.2009.]

[102] For more information on GlassJet printers see the webpage of DIP Tech Digital Printing Technologies: http://www.dip-tech.com/ [last accessed: 22.11.2009]

Figure 3.33 (left) Eiserfeld Municipal Bank, Germany, imprinted with GlassJet, 2006
Source: The webpage of DIP Tech Digital Printing Technologies: http://www.dip-tech.com/sitefiles/1/2114/14052.asp [last accessed: 22.11.2009]
Figure 3.34 (right) Eiserfeld Municipal Bank, façade detail
Source: Ibid.

German glass designer Bernd "Bernie" Hoffmann states that "the main benefit of the machine was that it allowed a large-format image to span across 295 tiles without film-production costs and without the need for multiple printing."

The firm talks assertively about this first line of digital printers arguing that it is redefining the possibilities for glass building elements. For company executive Frank Matz:

> When there was no digital printing some years ago, we had printed such a project in silk-screen printing. Therefore, we had used a single expensive screen for each single tile and color and the printing machine had to be set up for each screen. You surely can imagine how enormous the costs had been. But now we can save a lot of these costs by using the GlassJet. Moreover, we are able to realize pictures in a higher resolution than before.[103]

[103] Matt Slovick. "Machinery: GlassJet Prints Digital Images Directly on Glass," the webpage of the GlassMagazine: http://www.glassmagazine.com/article/commercial/machinery-glassjet-prints-digital-images-directly-glass [last accessed: 13.11.2009]

Likewise, for the Municipal Building in Alphen aan den Rijn, in 2002, Erick van Egeraat has preferred an imprinted glass façade. The building structurally has a more challenging large-scale façade than the previous examples in this study. The elevations are treated as a continuous but layered skin, wrapping around in different angles and connecting all parts of the building.

It appears that, as technology develops, printmakers can use many different shapes, and materials instead of using rectangular plates. Printing with movable panels that are premade in a factory or workshop seems to be the logical extension of this freedom. The photograph, on the other hand, as a raw material plays an active role in this process of assembly and in this respect, contributes to architectural production.

Figure 3.35 Erick van Egeraat Associated Architects, Municipal Building Alphen aan den Rijn,2002, screen-print on glass.
Source: Patterns in Design, Art and Architecture, ed. by Petra Schmidt, Annette Tietenberg, Ralf Wollheim. Basel: Birkhäuser, 2005, p. 96.

CHAPTER 4

PHOTOGRAPHY IN THE SPACE OF ARCHITECTURAL EXHIBITION

4.1 De-materialization of the Photograph as an Architectural Tool

Two main questions have been raised in this study so far: first, how the relationship between conceptual structure and perceptual experience of architecture can be explored by photography either the photograph as a mode of architectural representation or the photograph as itself a material entity. And, second, how do these photographs contribute to the immaterial and material formation of architectural content? Now, this study raises another question in the light of Jean-Louis Cohen's claim that "the question of the usage of photography in the field of architecture must be posed precisely in terms of the issue of context."[104] Hence, this part of the study aims to explore how photographs can be exhibited in different contexts, or to be specific, in the context of an architecture exhibition.

First of all, it should be stated that architecture is experienced physically, only by being in it; yet, it is exhibited through its representations. As the Italian architect and historian Bruno Zevi (1918-2000) asserts, there is the physical impossibility of transporting buildings, as one does with works of art.[105] Therefore, the one and only medium where architecture can be exhibited is an architectural exhibition, while it can only be displayed by the representations of buildings. Among the wide range of modes of architectural representation, photography

[104] Beatriz Colomina. co-ed. "The Misfortunes of the Image: Melnikov in Paris," in Joan Ockman (ed.), Architectureproduction, New York: Princeton Architectural Press, 1998, p. 102

[105] Bruno Zevi, Architecture as Space: How to Look at Architecture, New York : Horizon Press, 1974, p. 16.

has a significant importance due its potential to house both of the immaterial and material characteristics of architecture. That potential makes photography unique among other media by giving the viewer the sense of architectural space that cannot be realized in a drawing, model, or animation. Indeed, as mentioned before, architects used photography in such a way that the photograph has become a material to define architecture instead of being a subsidiary representation tool. In this respect, further processed as a raw material, Kester Rattenbury's previously mentioned claim that "the photograph has become more definitive than the architecture itself" becomes a pertinent remark.

Zevi further argues in the book "Architecture as Space" that it is possible to gather from all over the world the paintings and so to reveal their special quality in single great exhibitions, but for architecture, "an exhibition can be put together only at the expense of one's own fatigue, which presupposes a real passion for architecture."[106] It is indeed a difficult task to conceptualize architecture and display its representations in the context of an exhibition. As illustrated in chapter 2, a photograph can be a literal depiction of architecture as it can be a visually constructed substitute. Yet, this part of the study argues that those immaterial characteristics of photography can also be shaped within context.

Context will be understood in Benjaminian terms. Walter Benjamin argued in the essay "A Short History of Photography" that photography becomes creative "only when it takes itself out of context," and when it "frees itself from physiognomic, political, and scientific interest."[107] In terms of architecture, to become creative, Benjamin's statement presupposes the photograph to be freed completely out of its content and the context it pertains to; in other words, it requires the photograph to be held merely as an architectural material in the form of a print – detached from immaterial messages. Accordingly, context is one determinant way in which photographs are understood within which they are viewed.

[106] Ibid.

[107] Walter Benjamin. "A Short History of Photography," in One Way Street and Other Writings, London, Verso, 1979, p. 254

However, a photograph is already detached from its physical environment and context by the time it is pressed on the shutter-release button. Indeed, the original motive for the making of a photograph may disappear in time, leaving the de-contextualized image accessible to being “reframed” within new contexts.

The very omnipresence of the medium thus results from the photographs that are circulated in contexts for which they were not made. In art, institutions shape the nature of photography by the way they provide this context. Likewise, in the history of photography, context is to a large extent shaped by the characteristic ways in which photographs have been collected, stored, used and displayed. As an architectural means of representation, the photograph is not yet institutionalized; but there are many contextual realities developing out of the photography itself. For instance, the photograph used in architecture is rarely encountered in its original state; it is re-framed in billboards, in magazines and newspapers, as book covers, or on the walls of galleries and exhibitions.

Therefore, a photograph can be regarded in its context, isolated from its context, or reconsidered in a totally different context. Moreover, a certain photograph identified under different contexts will evoke different meanings. That is to say, photographs of a certain object viewed from two different points – no matter the points are fixed or mobile - shall not be identical. Moreover, a certain object, “pointed and shot” from a definite spot two times, even under the same circumstances – same equipment, same adjustment, same studio conditions - shall not be identical either. Two different men looking at a certain photograph do not see and perceive the same; likewise, two men looking at a certain point do not capture the same frame. Furthermore, two different cameras cannot take identical pictures under the same ambient.

In this connection, there are multiple and intertwined connotations of the term “photograph” which cannot be reduced to a simple, succinct definition. Yet, our comprehension of it changes according to its field of use, context, and point of view. Considering within the context of an architectural exhibition on the other hand, the photograph is the object of the display. Moreover, the photograph is

the document of the displayed content, a print as itself a physical entity, an immaterial representation, and also an artistic object.

For instance, held in the context of an Herzog & de Meuron architecture exhibition, Karl Blossfeldt's leaf imprinted on a panel, or the concrete blocks of Eberswalde Library function as objects of display; they are not regarded as building materials.

Figure 4.1 "Herzog & de Meuron: Archaeology of the Mind" exhibition in The Canadian Centre for Architecture (CCA).
Architectural elements in the context of an exhibition. Photo by Michel Legendre, CCA.
Source: The exhibitions webpage of the CCA: http://www.cca.qc.ca/en/exhibitions/19-herzog-de-meuron-archaeology-of-the-mind [last accessed: 12.11.2009.]

Within this conceptual framework, de-materialization of the photograph as an architectural element can be discussed in terms of the context of architectural exhibition. Architecture exhibitions are essential as a concluding point in this research, since various techniques of photographical representations can be displayed in this environment. More importantly, "architecture exhibition" is the embodiment of all the circumstances of the term photograph attributes in this study from immaterial expression to material existence.

4.2. An Inspiring Architectural Exhibition: *Architektur Denkform*

Herzog & de Meuron accepted that “Architecture Exhibition,” is an independent “type” in the chronology of their works as an “autonomous project.”[108] Being aware of the medium’s potential, Herzog & de Meuron concisely stress that their exhibitions are “like a test run making it possible for the architects to involve visitors in experiments that they otherwise could not realize.”[109] By consequence, exhibition is the place where they explore innovative techniques to represent their architecture. In fact, as Philip Ursprung has emphasized, the buildings of Herzog & de Meuron does not function as “a stage set for an aging praxis of representation” but operates rather as though “the buildings were exhibits in a larger, as yet unfinished exhibition” as a part of their urban study for Basel "city in the making" ("*Eine Stadt im Werden*?").[110]

It is the kind of exhibition that Herzog & de Meuron are looking forward to when they ask:

> Is there a form of presentation that makes sense of the objects and documents, that captivates visitors, mobilizes their entire attention and all their receptive and perceptive faculties? Is it possible to create a place in an exhibition space that, like an actual building site outside, in the town itself, would be a reality in its own right and at the same time would reflect the reality of the building it was documenting?[111]

An inspiring exhibition held in the fall of 1988 at the Architecture Museum in Basel,[112] *Architektur Denkform* (Architecture Thought Form), has a fundamental

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[108] Philip Ursprung. “Exhibiting Herzog & de Meuron,” Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 21.

[109] Ibid.

[110] Ibid, p. 29.

[111] Herzog & de Meuron, in Rémy Zaugg, p. 41. Quoted from Ibid, p. 34.

[112] The Basel architectural practice of Rasser + Vadi designed the Architekturmuseum itself, which was first occupied as "Domus's" business premises in 1959, known as “Domus-Haus.” The building was converted by the Swiss architectural firm Diener & Diener into the Architekturmuseum Basel in 1984. The museum is moved to the 1st floor of the Kunsthalle in June 2004. The renovation of the Kunsthalle directed by the Basel practice of Miller & Maranta,

position in understanding the creation of architectural space by the use of photography.

Figure 4.2 Exhibition "*Architektur Denkform,"* by Herzog & de Meuron, 1988.
Source: Gerhard Mack. Herzog & de Meuron, 1978-1988:The Complete Works (Volume 1), Basel, Birkhäuser, 1997, p.198.

To represent their architecture, Herzog & de Meuron have rather preferred to print the photographs of their buildings directly on to the windows of the museum. The photographs framed by the Museum Building have then acted as filters between the viewer and Basel view across the windows. Having quoted from the architects, the concept of the exhibition is superimposing different layers of representations of Herzog & de Meuron design with the real sections of

and of Zurich architect Peter Märkli's conversion of the rooms in the Steinenberg street wing for the Architekturmuseum.

the building as if they were “transparent screenplay images.”[113] The architects described their intention as:

> We turned the existing building into a projection screen, which we then used in order to convey our ideas to which we had given architectural form. So for the duration of the exhibition, the building of the Museum of Architecture itself became virtually one of our own buildings.[114]

Figure 4.3 Interior view from the exhibition *Architektur Denkform*
Source: Ibid, p.199.

[113] Rémy Zaugg, Herzog & de Meuron. “Five Exhibitions on H&dM by H&dM,” Rémy Zaugg/Herzog & De Meuron, Cantz, 1997, pp. 9-12.

[114] Ibid.

Figure 4.4 Exterior view of Basel Museum of Arhitecture, 1988.
Source: Photograph posted on the Blogspot by Travis on 6.08.2007: http://t-broussard07.blogspot.com/ [last accessed: 25.11.2009]

In that regard, the architects did appropriate the museum's façades to create a new space unexpectedly juxtaposed with Basel view. (Figure 4.5, on page 90)

Figure 4.5 Authentication of space. From the exhibition *"Architektur Denkform,"* Photographs of architectural works of Herzog & de Meuron superimposed on the windows of Basel Architectural Museum.
Source: Gerhard Mack. Herzog & de Meuron, 1978-1988:The Complete Works (Volume 1), Basel, Birkhäuser, 1997, pp. 201-203.

The changed sense of space in Herzog & de Meuron's projects can also be discussed in terms of the term "transparency." As stated by Ayşen Savaş, at this point, it is essential to recall Marcel Duchamp's (1887-1968) painting entitled *"*The Bride Stripped Bare by Her Bachelors, Even (or shortly as The Large Glass)" between 1915 and 1923. It is a complex piece made of two large plates of glass mounted in a metal frame which defines the space around it. Despite all the affinities, here, the frame is not essentially the agent to determine which visual fragments of the subject are verified and isolated. It is, in fact, the transparent medium within the frame that interchanges the context of the images via its location. (Figure 4.6 and Figure 4.7, on page 91)

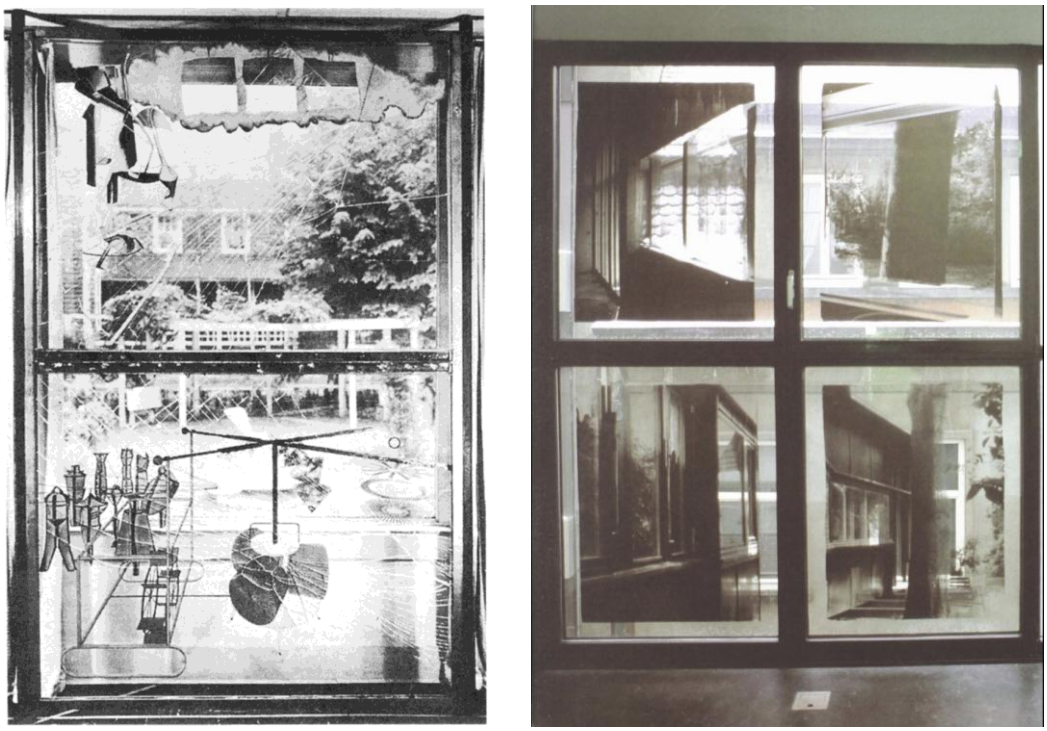

Figure 4.6 Marcel Duchamp. The Bride Stripped Bare by Her Bachelors, Even (The Large Glass). 1915-23.
Source: Branden W. Joseph. "John Cage and the Architecture of Silence," October, Vol. 81, The MIT Press, 1997, p. 91.

Figure 4.7 The window of the Basel Museum superimposed with views of Herzog & de Meuron projects.
Source: Gerhard Mack. Herzog & de Meuron, 1978-1988:The Complete Works (Volume 1), Basel, Birkhäuser, 1997, p. 200.

To clarify the boundary between vision and perception, frame's role in illuminating the "order" of seeing is obvious. In "The Order of Things"[115] Michel Foucault (1926-1984) demonstrated Velasquez's painting, Las Meninas to show that things are perceived far beyond than they appear. In the painting, there is a complex relationship between subject and object. Foucault designates that the painting, which he considers it as a frame, can be viewed both from the inside and from the outside. The book, which has also the image of Las Meninas on its

[115] Michel Foucault. "Las Meninas," The order of things: An Archaeology of the Human Sciences, New York, Vintage Books, 1994, pp.3-16

cover, starts with this extended discussion of the painting. Foucault further develops the central claim that all periods of history - particularly as Classical thought, Renaissance, and Modernism - have constituted their own accepted truth related within a discourse. Hence, he clarifies the relationship between words and things in such a way that the things described by words do not compensate with what has been seen. Within this conceptual framework, it is essential to reconsider the frame of the images in terms external conditions to further expand the discussion.

Despite the emphasis given, “iconography” was not the essential scope of the exhibition. Here I claim that Herzog & de Meuron did not treat “the photograph” merely as an aesthetic apparatus or an instrument of representation. Instead, the architects defined the borders of their understanding of architecture by means of the representation technique they have preferred, evidently with reference to art. In fact, Herzog & de Meuron have operated photography to produce an “architectural space” made up of their built objects.

Moreover, with regard to Philip Ursprung, there is an analogy between the project of the “unitary theory” proposed by Henry Lefebvre and the conception of photographical expression on the façades of Herzog & de Meuron.[116] According to Lefebvre’s conception, façades disappear in an "abstracted" space in which "everything can be viewed from every aspect,"[117] yet, Ursprung argues that Herzog & de Meuron give them a new concreteness. For Ursprung:

> At the interface between individual building and urban space, they condense the abstract space into a substance by means of images. This substance then knits together the "mental" and the "social" space indicated by Lefebvre. In so doing, Herzog & de Meuron are able to realize something that Lefebvre could only speculate about, namely the oneness of monument and building.[118]

[116] Philip Ursprung. “Exhibiting Herzog & de Meuron,” Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 29.

[117] Henri Lefebvre, “Social Space,” The Production of Space, translated by Donald Nicholson-Smith. Cambridge, Mass., USA: Blackwell, 1991, p. 125. Ursprung made this analogy in the book “Natural History.”

[118] Philip Ursprung. “Exhibiting Herzog & de Meuron,” Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 30.

This process was successfully attempted in the above-mentioned exhibition *Architektur Denkform*, as well. Considered from Lefebvre's perspective that ultimately everything can be transposed into everything else and that meaning could circulate in the space of discourse as freely as the visual in physical space, the function of photography as an operative tool to create physical space is a mechanistic approach. It justifies the above-mentioned conceptualizations of photography that (1) it is an artistic interpretation transposed into architecture; (2) it is a visual construct to represent architectural objects; and (3) it is at the same time an architectural material to create architectural space. In this context, the exhibition *Architektur Denkform* set a good example to the authentication of space by photography.

Figure 4.8 Different modes of representations of the House for a Veterinary Surgeon, by Herzog & de Meuron.
(Top) drawing from the exhibition, **(bottom left)** photograph by Margherita Spiluttini, **(bottom right)** transparent print upon the window of ArchitekturMuseum Basel.
Source: Gerhard Mack. Herzog & de Meuron, 1978-1988:The Complete Works (Volume 1), Basel, Birkhäuser, 1997, pp. 197,203.

CHAPTER 5

CONCLUSION: THE AUTHENTICATION OF SPACE

5.1 From Material Application to Immaterial Conception

With the increasing demand for the visual elaboration of external surfaces of buildings, photography becomes more of the central focus of the architectural inquiry among contemporary architects. It has been previously declared that as the conception of photography changes, it alters the material characteristics of architecture. In the same way, emerging print techniques have changed the materiality of the photograph. Therefore, as the photograph is adjusted with cutting edge technologies to become digital, printing terminology has also become digitized. In this sense, conventionally used terms such as screening (tram) and pigment are understood in terms of “pixels” – which is the short version for the term picture elements. Thus, a new graphic language of photography or in other words pictures made up with pixels emerge as a key concept.

Influential architect Rem Koolhaas (1944-) appropriated this new material characteristic of printing and elaborated with reference to the conception of traditional printing in the 2003-dated McCormick Tribune Campus Center in Illinois Institute of Technology. Conceived by the Dutch architect and the Office for Metropolitan Architecture, the design is highly illustrative in terms of understanding the development of the print as a building material which is blended with the latest technologies. In fact, Koolhaas did expanded this new digital context of photography in terms of frontal expression.

Figure 5.1 The McCormick-Tribune Campus Center, Chicago, OMA, 2003.
West façade with Mies portrait door
Source: The webpage of the Wallpaper Design Magazine: http://www.wallpaper.com/gallery/architecture/re-sampling-ornament-basel/17050358/1 [last accessed: 13.11.2009]

It has been clarified in chapter 3 that the print, as the material expression of photography on façades, can be perceived differently due to the viewer's standpoint or daily atmospheric conditions. Seen from a distance, the imprint looks smooth and unified, yet the texture of ink on the surface has a particular dotted pattern, which is apparently discerned when viewed more closely. In digital terms, this dissolution is called pixelation. Accordingly, individual pixels can be distinguished by the eye when the image is enlarged. Despite the latest techniques enabling very close array of those dots that cannot be distinguished

by the eye – as in Giclée printing[119]– Koolhaas has created his imprint pattern deliberately from those dots - indeed dots made up of circular pictogram[120] images. That is to say, seen from a closer distance, it can be clearly seen that the dotted pattern is replaced by pictograms with an appropriately arranged size.

Figure 5.2 Pictogrammar, icons designed Michael Rock.
Detail of the façade of OMA's McCormick Tribune Campus Center, Chicago
Source: The official webpage of Michael Rock's 2x4 design studio: http://2x4.org/ [last accessed: 18.09.2009]

[119] Giclée is a French term meaning to spray or squirt, in fact it is how an inkjet printer works. However, it is not the same as a standard desktop inkjet printer, and is much larger. In Giclée printing, no screen or other mechanical devices are used and therefore there is no visible dot screen pattern. The image has all the tonalities and hues of the original image.
For detailed information see http://www.gicleeprint.net/abtGclee.shtm

[120] Pictogram is a graphical way of representing a word, object, simple instructions or even an idea, concept, or an activity that conveys its meaning through its pictorial resemblance to a physical object. Pictograms are visualizations formed with a universal sign language that can be understood and read by everyone.

In the Illinois Institute of Technology McCormick Tribune Campus Center, in fact, pictograms are used to form a lexicon of hundreds of graphic signs to represent the idea of an universal student and the range of activities on campus.

Indeed, more than 300 pictograms can be seen everywhere from the fritted glass partition walls to “fuzzy” wallpapers corresponding to the building's various functions - such as the one on the wall of the reading lounge which depicts figures studying and thinking or the group of figures etched into the wooden coffee bar. (Figure 50, p.104)

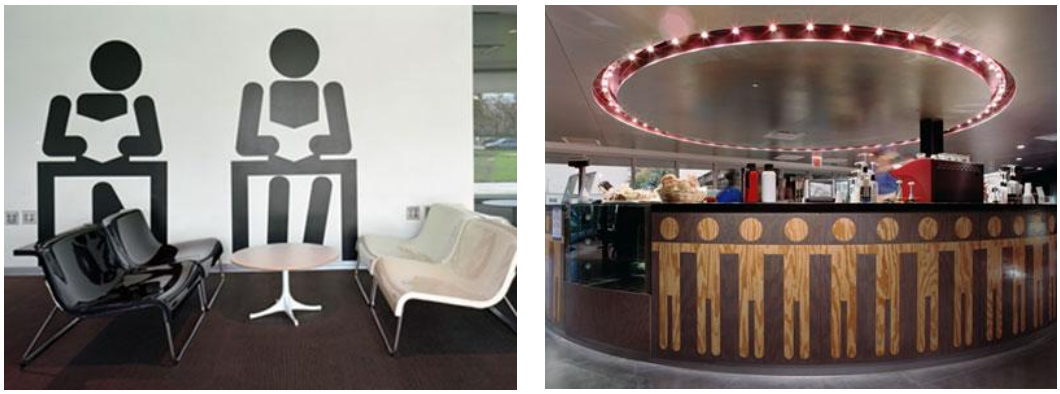

Figure 5.3 (top) Pictogrammar, icons designed by the graphic designer Michael Rock.
Source: Ibid
Figure 5.4 (bottom) Pictogram icons representing various student activities, by graphic designer Michael Rock.
Source: Ibid

These icons serve as the basis for various graphic elements throughout the space and communicate with both large and small scales. Yet, the aim of using pictograms is usually for the production of a bigger image. Koolhaas interprets the “pictogram” as the smallest unit to form his prints, as pixels. For instance, at the main entrance, pictograms in the form of small, circular dots come together to form a large-scale photographic portrait of Mies van der Rohe[121] when viewed from a distance. Certainly, upon closer inspection, the circles reveal their own distinct graphics, each representing a figure appearing in differing scales and contexts.

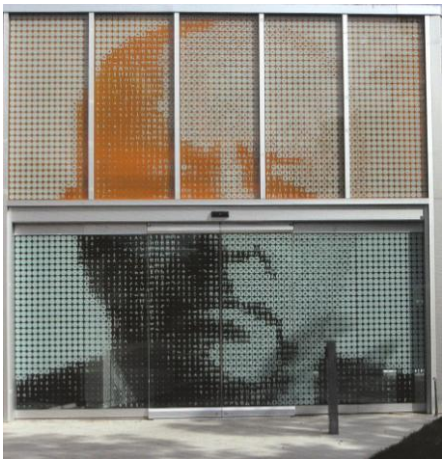

Figure 5.5 (left) The glass entrance door with the portrait of Mies van der Rohe, IIT.
Source: Ibid

Figure 5.6 (right) Closer detail of the door, IIT, pattern made of pictograms.
Source: Ibid

[121] In his essay “Miestakes,” Koolhaas shows his admiration for Mies van der Rohe. Mies van der Rohe became the head of IIT's architecture program in 1938, after the closure of the Bauhaus. The master plan of the campus was made by Mies van der Rohe; thereafter his signature “less is more” steel and glass structures dominated IIT’s aesthetic. Koolhaas’s design as an addition to the already architecturally significant main campus alludes his engagement with Mies.

Yet, Koolhaas used this visual trick to elaborate the material characteristics of his design. In fact, here, the witty part is that as one opens the sliding door to enter the building, he opens Mies' mouth, as well. Or, for Koolhaas, to get inside, one must “walk through Mies’s homage.”

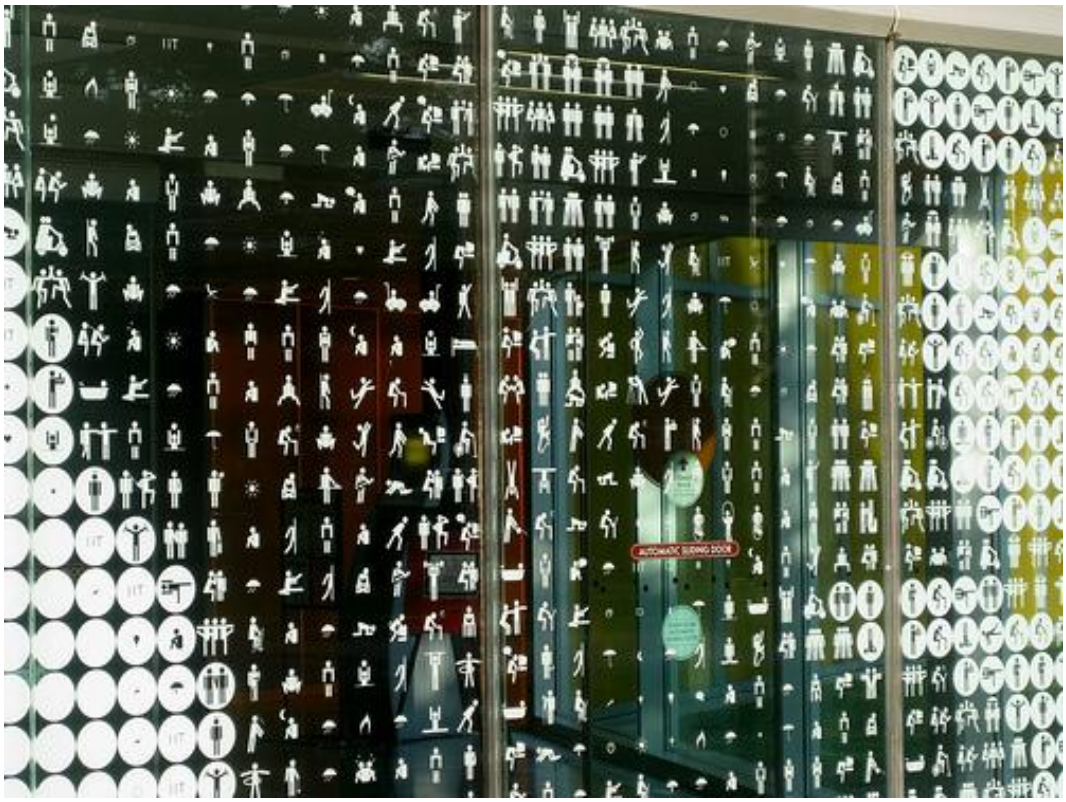

Figure 5.7 A close-up from the door, pattern made of pictograms
Source: The photograph is shared on the Flickr, The Online Photo Management and Sharing Web Site by “hellebelle”: http://www.flickr.com/search/?s=int&w=all&q=mccormick+iit&m=text [Last Accessed: 10.11.2009]

Although, this kind of iconography plays a big part in Koolhaas's designs, it is still controversial to imprint a pixelated portrait[122] of the master architect of Modern Architecture since it is reminiscent of a Venturian approach. Koolhaas, reflecting Robert Venturi (1925-) and Denise Scott Brown's (1931-) conviction in the book "Learning From Las Vegas" notes that in our electronic information age "architecture should reject abstract form" of the Miesian variety and "restore iconography as the essential architectural element."[123]

Yet, reconsidering the IIT building within the framework of this study, one point strikes attention: although photography is imprinted to contribute to the material characterization of the building, the imprinted photograph emphasizes more of an immaterial description. From this point of observation, it can be said that the processes stemming from the underlying immaterial meaning to a material existence undo to foreground a figurative statement. In this context, the materiality of the photograph has become representative again. Put it another way, on the contrary of the cases illustrated in chapter 3, technical innovations of the materials and the media is used here to transform the existing architectural surface into a figurative entity.

Notwithstanding the direction present in many of the photographical interpretations, portraits have a particular relationship to "authentication." In this context, Susan Sontag's claim[124] on photographing people can be reconsidered to argue that a portrait can turn people into objects that can be symbolically possessed. In this connection, the portrait of Mies can be read in terms its immaterial content. That is to say, Mies, who stylistically used simplified geometric forms in a nonrepresentational attitude to reveal the inherent material

[122] The creation of images using tiny pictograms was subcontracted to Michael Rock's Two-By-Four, multidisciplinary design studio. In 2007, the Museum of Modern Art in New York City acquired several early 2x4 projects including this portrait of Mies by Michael Rock, wallpapers for the McCormick Tribune Building at IIT, Prada and Vitra, an entire collection of 2x4-designed ANY Magazines as well as other original, one-of-a-kind books.
For further information see: http://2x4.org/

[123] Lynn Becker. "Oedipus Rem," (originally published under the title "Of Mies and Rem") the Chicago Reader, September 26, 2003.

[124] Susan Sontag, On Photography, electronic edition by Rosetta Books, New York, 2005.

qualities of buildings, in this way has contributed to the immaterial content of Modern Architecture. Yet, now, Mies has himself become the material of a contemporary design and contributes to Koolhaas's immaterial content.

Therefore, even though the content is strictly abstract, photography retains its figurative/representational position within the building's materiality. It is therefore necessary to clarify as a last point that Koolhaas used imprinted portraits in the interior of IIT, as well. For instance, on the "wall of founders" the architect did not hang photograph frames but instead he preferred imprinted photographic portraits on a transparent material and merged within the context of the interior.

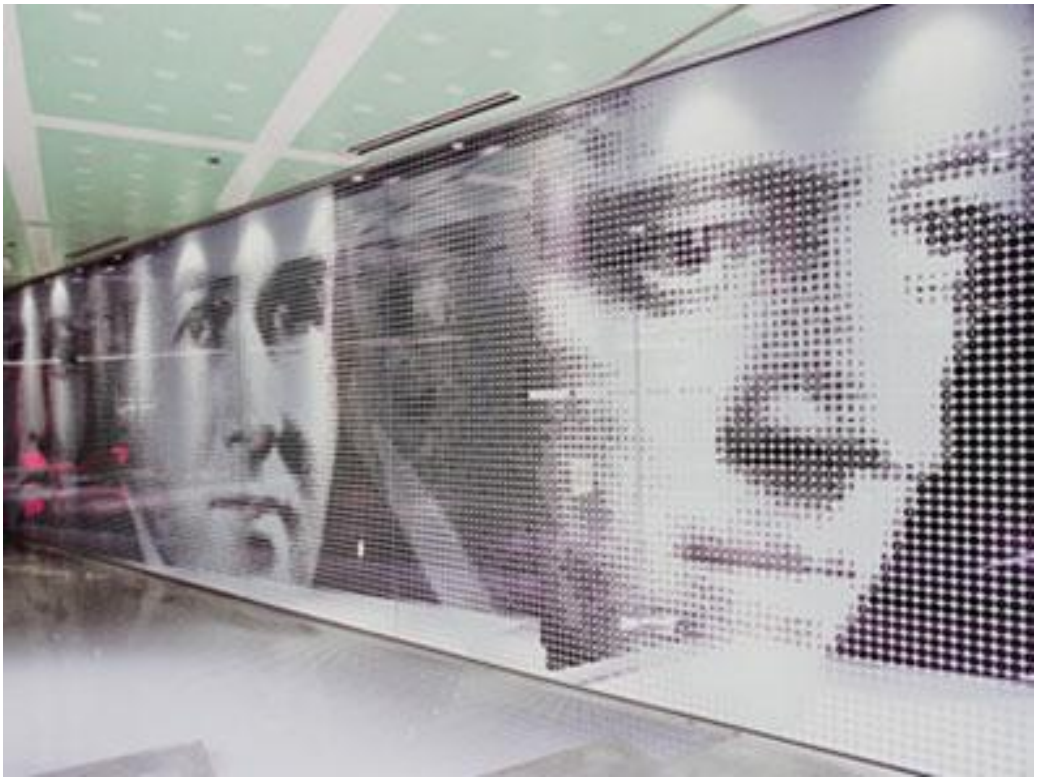

Figure 5.8 The Fritted Glass Founder's Wall, detail, interior
Source: Ibid.

5.2 Photographic Print for the Authentication of Architectural Space

Given as a starting point, the physical substance of an architectural space is building. Just as buildings are considered “spatial,” the substance of architectural conception – the representations of buildings are also spatial. Therefore, both buildings and their representations are considered in this study as “architectural products” and proposed to be spatially used to produce architecture. In this context, space in architectural terms is meant to be a conceptually and physically built/constructed covering either one or both of the immaterial and material qualities of architecture. Accordingly, this study redefines space as an architecturally authorized entity produced by photography. Respectively, this authentication can be any idea (representation) or its material expression created and authorized by an architect.

Hereupon, the abovementioned architects can be said to concentrate on the façades of their projects to the detriment of the actual space. Yet, as it has been explored in the case above, the detriment of actual space results in the authentication of space due to the use of photographs. In this context, the facades of Herzog & de Meuron are authentic in urban context, as their exhibition space merged with the view of Basel. Likewise, regarding the use of photography on the abovementioned wall of founders’, a photographical sense of authentication can also be referred to. Indeed, in all of the cases exemplified in this study, architectural space is defined through the transparency of the imprinted photographs.

Moreover, photography creates its own “aura” in both representational and physical spaces, regarding both the immaterial and material characteristics of architecture. Revisiting Herzog & de Meuron’s Eberswalde Library in view of Thomas Ruff's digitally constructed photograph, a claim that Ruff offers an immaterial insight into the representational display of the library can be recalled.

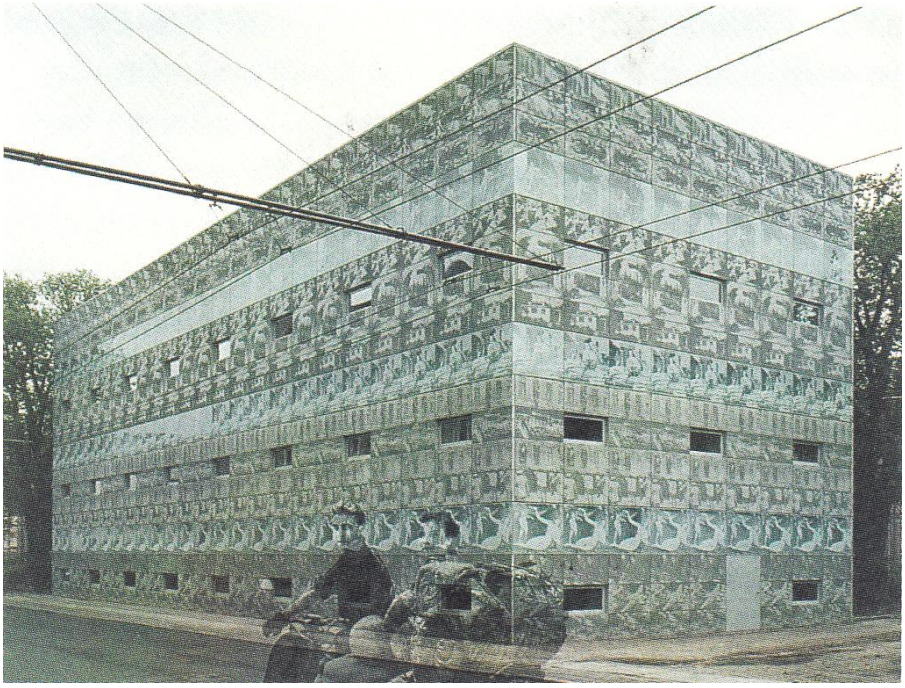

Figure 5.9 Photograph constructed by Thomas Ruff, Eberswalde Library
Chromogenic colour print, 185 x 230 cm.
Source: Philip Ursprung. "Visiting Thomas Ruff in Düsseldorf," Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 165. P.32.

Comparing Ruff's construction with once more the previous representation of the library, (Figure 3.21, on page 67) it is seen that a photograph of two people on a laden scooter is montaged onto a photograph of the library. Ruff has attached the people as if they were passing by the building and excluded all of other daily obstructions, such as cars, trees, and pedestrians. At the first glance, his intervention to the image might have been considered as unnecessary, because the artist could have conventionally captured two people in motion and the building at the same time by reducing the shutter speed of the camera. Yet, Ruff preferred to manipulate the image digitally. For Terrence Riley,[125] the people are

[125] Terence Riley is the chief curator of the department of architecture and design at The Museum of Modern Art.

blue-grey and semi-transparent like the building in the original representation. In fact, it would be conflicting if Ruff were to shoot the building with its existing setting, because, in this way, as Riley defines, this "ghostlike"[126] spatial continuum as "a new idea of transparency that goes beyond the modernist enthusiasm for light and air"[127] has changed the immaterial sense of the building. Indeed, as Hill indicates "as one is seen through the other, the building and the people appear ghostly, caught between the material and the immaterial."[128]

Recalling once more the argument in the book "On Photography," Susan Sontag asserts that "photography isolates things from their context, turning them into images, within systems of information, classification, and storage."[129] If the greatest strength of photography is to isolate things 'out of context', then, knowing what to leave out becomes a significant act for a "constructed photograph". Hence, one of the main arguments of this thesis has been to reveal and emphasize this kind of photography and show the raw potential of photography in architecture.

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[126] Terence Riley. "Light Construction," in Light Construction, exhibition catalogue, Museum of Modern Art, New York, Abrams, 1995, 11 quoted from Philip Ursprung. Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p.30, footnote 38.

[127] Riley stated this in the exhibition "Light Construction" representing the Goetz Collection in Munich by Herzog & de Meuron as follows:
Transparency and luminescence have reemerged in the vocabulary of architecture, and light and "lightness" have become key concepts for a significant number of contemporary architects, as well as artists who create installations. Recent work by these designers recalls the use of transparent materials in early modern structures, but they have introduced new ideas and technical solutions. In doing so, they have redefined the relationship between the observer and the structure by interposing elements that both veil and illuminate. In this architecture of lightness, buildings become intangible, structures shed their weight and facades become unstable, dissolving into an often luminous evanescence.

[128] Jonathan Hill. Immaterial Architecture, New York, Routledge, 2006, p. 180.

[129] Susan Sontag, On Photography, electronic edition by Rosetta Books, New York, 2005, p.156.

5.3 Concluding Remarks

The progressive substitution of photography in place of the building skins creates a new architectural vocabulary understood in a highly figurative manner. This visual expression of photography within the building may be regarded in terms of the concept of "ornament." The use of the photograph as a building material is functional, yet, it should not be understood within the limits of façade cladding. In fact, the technique of application of a photograph onto the external surface of buildings requires etching (for concrete), or screen-printing (for glass). Therefore, a photograph is not a cladding material, instead it should be referred as a building material in its own right. Moreover, a photograph blends with the existing material it is imprinted upon and forms a new material characteristic.

In fact, photographical use in architecture either for architectural representation or for construction has created its own forms of expression that reflected the shifts in the theoretical underpinnings of architecture and building technologies. The use of photoengraving and of digital etching methods in concrete as well as glass has led to innovative and often surprising uses of photography on building skins; and thus has introduced a new relationship between texture, transparency and visual effects, allowing for a technologically based architectural expression that can be regarded as an "architecture *parlante."*[130] Yet, it is for now pretentious to argue that this new characteristic defines a "style" as in the case of lightweight, and transparent look of Modern glass or thick, heavy, and opaque wall construction. Still, this characteristic of the photograph in architecture certainly has an autonomy.

In this context, the photograph is argued to be a de-materialization tool for architectural production. Moreover, it can be re-contextualized as a functional ornament. This additional functioning of materials allows the de-materialization to such an extent that materials lose their previous qualities - glass is no more mere glass, but a semi-transparent material housing overlapping concepts. Accordingly, those photographic buildings are considered to appear "authentic."

[130] Originally associated with Claude Nicolas Ledoux, the phrase architecture *parlante* ("speaking architecture") refers to the concept of buildings that explain their own function or identity.

Moreover, photographical interpretations of contemporary architecture is an informative case to understand the technical, theoretical, and aesthetic boundaries of photographical expression in architecture in terms of its influence on actual practice. In this connection, photography might be considered as a method for contemporary architects to quest for simplicity concerning the representational and physical impact of a building.

This photographical design conception can also be considered from another perspective that the use of photography as a design element might have been an attempt to create a specific architectural production technique. In fact, photography not only has proceeded architectural design processes, but it has also altered the production techniques. Development in technique including scale, dimension, transparency, and color in connection with the development in industrial printing technology grounds a base for emergence and proliferation of this context-free situation of photographs in architecture. The development in the process from the dark room to techniques of industrial printing technology leads the way. When a photograph is used with the emergent printing technology for formal characteristics of a design, it means that it is isolated from its context. In contrast to the immaterial state which re-presents itself within a new context, using the photograph as a mere material does not require any contextual reference. Only when a photograph is used as a material to create a blending effect, then it becomes authentic - which is also re-contextualization.

Accordingly, this kind of signification or meaning proposed in architecture encountering with the arts has influenced many architects and has inspired them to design facades as autonomous artworks. The view of photography as a de-materialized architectural element turns the surface ornament of the buildings into a characteristic theme. However, when rigorously examined, it can be seen that the cases exemplified in this thesis are all designed in a modernist and simplified attitude with the devoid of ornament and embellishment. This might be due to the reason that the use of photography leads to a complicated visuality which strain the eyes, or due to moderately high construction fees. Furthermore, it can be alleged that these characteristic themes might create particular types of architectural buildings such as an exhibition hall, warehouse, and library with

respect to their specific definitions and needs of the architectural scheme to highlight the "aesthetic composition of the building."[131] Still, serving to the Modern on one hand, these facades promote an image culture and ornamented surface on the other.

To be exact, the introduction of new materials that come along with the conception of architecture were developed with new techniques and changed building construction technologies. Unlike traditional materials, these new materials distinguished in architecture have sophisticated architectural styles while at the same time technically put a new face on the building industry. Undoubtedly, the "photograph" is the most appealing "new material" considering its potential as an aesthetic and functional object, but also considering the communication of the building with the user and its surrounding environment.

Moreover, it is certain that digital technologies have helped to see the deeper mechanisms involved in photography, particularly in terms of the industrial print. Still, in essence, these mechanisms or processes have very little to do with technology itself. The technique of photogram elaborated by László Moholy-Nagy in the first half of 20th century is in principle the same with what Herzog & de Meuron does in the end of that century. What is new, however, is the growing demand and the growing possibilities for research from the field of photography. In that regard, the photograph is not a recently emerged material in architecture; what is emergent is the application technique to blend the photograph with architectural surface - which at the same time makes the photograph understood as a raw material.

To conclude, the determination of existential space with the aid of photography places the architect as the translator, interpreter, and author of the immaterial and material qualities of contemporary architecture. Creating an architectural space- such as an exhibition, a building, or a façade is no longer just designing its borders; photography has its own authenticity of surface and an implied depth of materiality.

[131] The Function of Ornament, ed. by Farshid Moussavi and Michael Kubo. Harvard University, Graduate School of Design, 2006, p. 5.

Figure 5.10 Michelangelo, Sistine Chapel
The change in technique, scale, and conception of the spatial effect of the image
Source: http://www.italianvisits.com/people/michelangelo/images/michelangelo-sistine_chapel.jpg [last accessed: 20.10.2009]

BIBLIOGRAPHY

A Matter of Art: Contemporary Architecture in Switzerland. ed. Centre Culturel Suisse Paris, Birkhäuser Basel, 2001

Ackerman, James S. "The Photographic Picturesque," Artibus et Historiae, 24: 48. 2003

Agrest, Diana. Architecture from Without: Theoretical Framings for a Critical Practice. Cambridge, Mass.: MIT Press, 1991

Allen, Stan. Architecture, Technique, and Representation / Essays. Australia: G+B Arts International, 2000

Andy Warhol. ed. Annette Michelson, October Files 2, The MIT Press, 2001

Architecture and its Image: Four Centuries of Architectural Representation: Works from the Collection of the Canadian Centre for Architecture. ed. Eve Blau and Edward Kaufman, Cambridge, Mass.: MIT Press, 1989

Architecture of Fear. ed. by Nan Eliin. Princeton Architectural Press, 1997

ARCHITECTUREPRODUCTION. ed. Joan Ockman; guest ed. Beatriz Colomina, New York: Princeton Architectural Press, 1988

Arnheim, Rudolf. "On the Nature of Photography," Critical Inquiry, Vol. 1, No. 1. The University of Chicago Press, 1974

Barthes, Roland. Elements of Semiology, translated from the French by Annette Lavers and Colin Smith, New York: Noonday Press, 1977

_____. Mythologies, selected and translated from the French by Annette Lavers, London: Vintage 1993

Benjamin, Walter. Illuminations. ed. by Hannah Arendt, translated by Harry Zohn, New York; Harcourt: Brace & World, 1968

_____. “A Short History of Photography,” in One-way Street and Other Writings. translated by Edmund Jephcott and Kingsley Shorter, London ; New York : Verso, 1997

Berger, John. Ways of Seeing. London, Penguin Books, 1972

_____. “Understanding a Photograph,” in Classic Essays on Photography, ed. Alan Trachtenberg, New Haven: Leete’s Island Books, 1980

_____. “The Ambiguity of the Photograph,” in The Anthropology of Media : A Reader, ed. by Kelly Askew and Richard R. Wilk. Blackwell Publishers, 2002

Buchloh, Benjamin H. D. “Gerhard Richter's "Atlas": The Anomic Archive,” October, Vol. 88, The MIT Press, 1999

Classic Essays on Photography, ed. Alan Trachtenberg, New Haven: Leete’s Island Books, 1980

Colomina, Beatriz. “Le Corbusier and Photography,” Assemblage, no. 4, Oct., 1987, p.12.

_____. Privacy and publicity: Modern Architecture as Mass Media, Cambridge, Mass.: MIT Press, 1994

_____. Sexuality & Space. ed. Jennifer Bloomer, New York: Princeton Architectural Press, 1992

Damisch, Hubert. “Five Notes for a Phenomenology of the Photographic Image,” October, Vol. 5, Photography, the MIT Press, 1978

Dorment, Richard. “What Is an Andy Warhol?” http://www.nybooks.com/articles/23153. [last accessed: 12.10.2009]

Duve, Thierry de and Rosalind Krauss. “Andy Warhol, or The Machine Perfected,” October, Vol. 48, The MIT Press, 1989

Fiske, John. Introduction to Communication Studies, New York: Routledge, 1990

Foucault, Michel. The Order of Things: An Archaeology of the Human Sciences, New York, Vintage Books, 1994

Frampton, Kenneth. “A Note on Photography and Its Influence on Architecture,” Perspecta, Vol. 22, the MIT Press, 1986

Goldhagen, Sarah Williams. “Something to Talk About: Modernism, Discourse, Style,” JSAH, vol. 64, no. 2, 2005

Great Photographers. ed. by the editors of Time-Life Books, New York, 1971

Hambourg, Maria Morris. “Photography Between the Wars: Selections from the Ford Motor Company Collection,” The Metropolitan Museum of Art Bulletin, New Series, Vol. 45, No. 4, 1988

Herzog & De Meuron, ed. Wilfried Wang. Zurich, Munich, London: Artemis, 1992

Herzog & de Meuron: Natural History. ed. Philip Ursprung, Montreal: Canadian Centre for Architecture; Baden, Switzerland: Lars Müller, 2002

“Herzog & de Meuron 1981-2000,” El Croquis. Omnibus Volume. 2. rev. and adv. ed. No. 60 + 84, 2000. With contributions by Herzog & de Meuron / Jeffrey Kipnis / Alejandro Zaera. ISBN-No. 84-88386-15-X

Herzog, Jacques and Pierre de Meuron, “The Hidden Geometry of Nature: Six Projects,” Assemblage, No. 9, The MIT Press, 1989

Hill, Jonathan. Immaterial Architecture, New York, Routledge, 2006

Hurn, David and Bill Jay. On Looking at Photographs, Lenswork Publishing, 2000

In Detail: Building Skins: Concepts, Layers, Materials, ed. Christian Schittich. Basel: Birkhäuser, 2001

Ivins, William Mills, Jr. How Prints Look: Photographs With A Commentary. Beacon Press; Revised edition, 1987

_____. “Photography and the Modern Point of View: A Speculation in the History of Taste,” Metropolitan Museum Studies, Vol. 1, No. 1, 1928

Kracauer, Siegfried and Thomas Y. Levin. “Photography,” Critical Inquiry, Vol. 19, No. 3, The University of Chicago Press, 1993

_____. The Optical Unconscious. Cambridge, Mass.: MIT Press, 1993

_____. The Originality of the Avant-garde and Other Modernist Myths. Cambridge, Mass.: MIT Press, 1985

_____. “The Story of the Eye,” New Literary History, Vol. 21, No. 2, the Johns Hopkins University Press, 1990

_____. “When Words Fail,” October, the MIT Press, Vol. 22, 1982

Leatherbarrow, David and Mohsen Mostafavi. Surface Architecture, Cambridge, Mass.: MIT Press, 2002

Lefebvre, Henri, The Production of Space, translated by Donald Nicholson-Smith. Cambridge, Mass., USA: Blackwell, 1991

Liebermann, Valeria. Eberswalde Library: Herzog & de Meuron, AA Publications, 2004

Liquid Stone: New Architecture in Concrete, ed. Jean-Louis Cohen and G. Martin Moeller, Jr., Basel: Birkhäuser, 2006

Loos, Adolf. Ornament and Crime : Selected Essays, Ariadne Press, 1997

Lupton, Ellen. Skin: Surface, Substance, and Design, New York: Princeton Architectural Press, 2002

Mack, Gerhard. Herzog & de Meuron, 1978-1988: The Complete Works. Volume 1. Basel; Boston : Birkhäuser, 1997

_____. Herzog & de Meuron, 1992-1996: The Complete Works. Volume 3. Basel; Boston: Birkhäuser, 2005

Margolin, Victor. "Constructivism and the Modern Poster," Art Journal, Vol. 44, No. 1, College Art Association, 1984

Moholy-Nagy, László. Painting, Photography, Film. translated by Janet Seligman (originally published in France in "*Malerei, Fotoğrafie, Film*"), Cambridge, Mass.: MIT Press,1969

_____. The New Vision. New York, 1947

Niedenthal, Simon. "Glamourized Houses: Neutra, Photography, and the Kaufmann House," Journal of Architectural Education, 47: 2, 1993

October: The Second Decade, 1986-1996. ed. Rosalind E Krauss, Cambridge, Mass.: MIT Press, 1997

Patterns in Design, Art and Architecture, ed. by Petra Schmidt, Annette Tietenberg, Ralf Wollheim. Basel: Birkhäuser, 2005

Photography: A Critical Introduction. ed. Liz Wells, London; New York: Routledge, 2004

Pictures of Architecture Architecture of Pictures: A Conversation Between Jacques Herzog and Jeff Wall: Art and Architecture in Discussion, moderated by Philip Ursprung. Springer, 2004

Pollack, Peter. The Picture History of Photography, New York, H. N. Abrams, 1969

Reichlin, Bruno and Francesca Rogier. "Objectlike: The Ricola Storage Building," Assemblage, No. 9, the MIT Press, 1989

Riley, Terence. “Light Construction,” Light Construction, exhibition catalogue, Museum of Modern Art, New York, Abrams, 1995

Rock, Michael. The official web page of 2x4 Design Studio: http://2x4.org/ [last accessed: 21.11.2009]

Rosa, Joseph. A Constructed View: The Architectural Photography of Julius Shulman, Rizzoli, 2008

Rowe, Colin and Robert Slutzky. Transparency, Basel: Birkhäuser Verlag, 1997
Rubi, Ilka. Minimal Architecture, New York: Prestel, 2003

Rubi, Ilka, Andreas Ruby and Philip Ursprung. Images: A Picture Book Of Architecture, München, Berlin London, New York 2004

Saussure, Ferdinand de. Course in General Linguistics, translated, with an introduction and notes, by Wade Baskin, New York: McGraw-Hill Book Co., 1966

Scruton, Roger. “Photography and Representation,” Critical Inquiry, Vol. 7, No. 3, The University of Chicago Press, 1981

Snyder, Joel. "Las Meninas and the Mirror of the Prince,” Critical Inquiry, Vol. 11, No. 4, The University of Chicago Press, 1985

Sontag, Susan. On Photography, electronic edition by Rosetta Books, New York, 2005

Stoller, Ezra. “Photography and the Language of Architecture,” Perspecta, Vol. 8 1963

Stungo, Naomi. Herzog & de Meuron, London: Carlton Books, 2002

Surface Consciousness, ed. by Mark Taylor, London: Academy Editions, 2003

Szarkowski, John. The Photographer's Eye, New York, Museum of Modern Art; 1966

The Anthropology of Media: A Reader. ed. by Kelly Askew and Richard R. Wilk, Blackwell Publishers, 2002

The Function of Ornament. ed. Farshid Moussavi and Michael Kubo, Barcelona: Actar, Harvard University, Graduate School of Design, 2006

The Photography Reader. ed. Liz Wells, London; New York: Routledge, 2003

The Principle of Cladding. ed. Max Risselada, 010 Uitgeverij, 2008

The Online Etymology Dictionary: http://www.etymonline.com/index.php?search=photography&searchmode=none [last accessed: 21.10.2009]

The Warhol Online Factory web page: [last accessed: 11.11.2009] http://www.warhol.org/interactive/silkscreen/main.html

The web page of DIP Tech Digital Printing Technologies. GlassJet Printers: http://www.dip-tech.com [last accessed: 22.11.2009]

The web page of Masters of Photography: [last accessed: 22.11.2009] http://www.masters-of-photography.com/R/rodchenko/rodchenko_balconies_full.html

The web page of Moscow House of Photography: http://www.mdf.ru/english/search/authors/rodtchenko/3924.html?person=rodtchenko [last accessed: 22.11.2009]

Thinking Photography. ed. Victor Burgin, Macmillan, 1982

This is Not Architecture: Media Constructions. ed. Kester Rattenbury, New York: Routledge, 2002

Venturi, Robert. Complexity and Contradiction in Architecture, New York: Museum of Modern Art, 1977

_____ and Denise Scott Brown, Steven Izenour. Learning from Las Vegas: The Forgotten Symbol of Architectural Form, Cambridge, MA: MIT Press, 1977

Vertov, Dziga. Kino-eye: The Writings of Dziga Vertov, University of California Press, 1985

Warhol, Andy and Pat Hackett. PoPism: The Warhol '60s, New York and London: Harcourt Brace Jovanovich, 1980

Weston, Richard. Materials, Form and Architecture, Yale University Press, 2003

Zaugg, Rémy. Architecture by Herzog & de Meuron, Wall Painting by Rémy Zaugg: A Work for Roche Basel. ed. Michele Zaugg-Röthlisberger and Rémy Zaugg, translated by Catherine Schelbert and Charles Penwarden, Basel; Boston: Birkhäuser, 2001

_____ and Herzog & de Meuron. “Five Exhibitions on H&dM by H&dM,” Rémy Zaugg/Herzog & De Meuron, Cantz, 1997

Zevi, Bruno. Architecture as Space: How to Look at Architecture, New York: Horizon Press, 1974

Zumthor. Peter, "A Way of Looking at Things," in Thinking Architecture, Basel Boston Berlin: Birkhäuser, 2006

APPENDIX A

SELECTED IMAGES FROM THOMAS RUFF'S NEWSPAPER ARCHIVE

Source: Source: Gerhard Mack. Herzog & de Meuron, 1992-1996: The Complete Works (Volume 3), Basel, Birkhäuser, 2005, pp. 78-9.
Source: Philip Ursprung. "Imprints and Moulds," Herzog & de Meuron: Natural History, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p. 252.

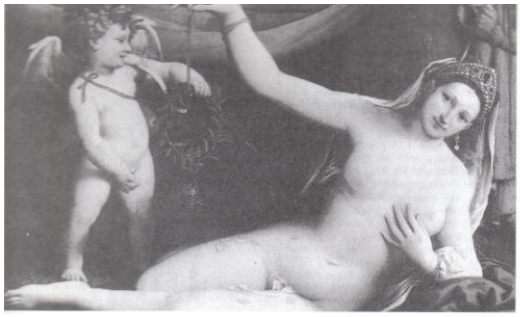


Figure A.1 (left) Thomas Ruff Newspaper Photo, Venus and Cupido by Lorenzo Lotto.
1996 Chromogenic colour print, 23.5 x 28 cm
Figure A.2 (right) Thomas Ruff Newspaper Photo, Bernauer Strasse (detail) June 17,1961 in Berlin: an old woman during her flight to West. 1996 Chromogenic colour print. 38 x 26.5 cm

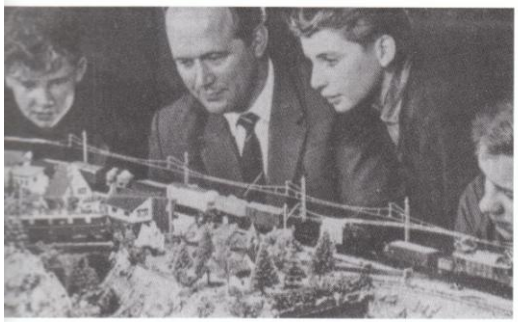


Figure A.3 (left) Skepticism towards technology: Family idyll with a toy train.
Figure A.4 (right) Reunification celebration at Brandenburg Gate, Berlin 1989.

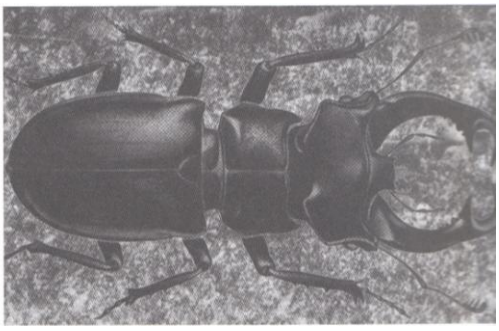


Figure A.5 (left) Thomas Ruff Newspaper Photo, A Bauhaus icon: the "Haus am Horn 61" in Weimar. 1996 Chromogenic colour print. 22.5 x 36.5 cm
Figure A.6 (right) Stag beetles, assigned in pairs.

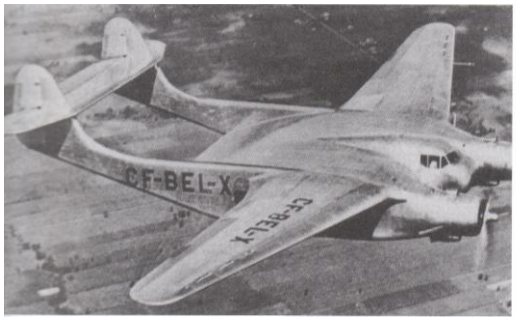


Figure A.7 (left) Thomas Ruff Newspaper Photo, Airplane. Prototype fuselage wing plane: it never went into production. 1996 Chromogenic colour print. 22.5 x 36.5 cm
Figure A.8 (right) Thomas Ruff Newspaper Photo, Bernauer Strasse (detail)
Men pulling the fleeing woman down before the GDR police get to her.
1996 Chromogenic colour print. 38 x 26.5 cm


Figure A.9 (left) Thomas Ruff Newspaper Photo, Girls on a Rooftop, 1996.
Young women listening to music on a planted roof in Berlin in the 1920s.
Chromogenic colour print. 16.5 x 40.5 cm
Figure A.10 (right) Thomas Ruff Newspaper Photo, Bernauer Strasse (detail)
Lookers-on at the famous flight in Bernauerstrasse, West Berlin.
1996 Chromogenic colour print. 38 x 26.5 cm

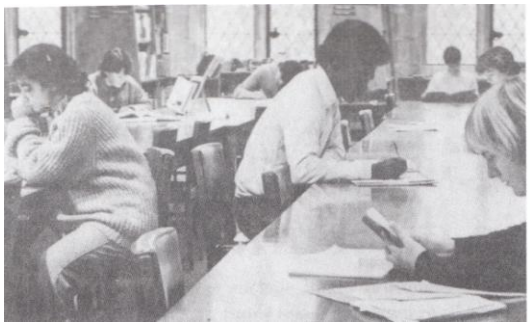



Figure A.11 (left) Thomas Ruff Newspaper Photo, Students of the Atlantic College in Wales.
1996 Chromogenic colour print. 18 x 38.5 cm
Figure A.12 (right) Thomas Ruff Newspaper Photo, Olympic Games 1936 in Berlin
The subject was dropped. 1996 Chromogenic colour print. 56 x 82 cm

Figure A.13 (left) Thomas Ruff Newspaper Photo, Old Palazzo
Archway of the palace of *Colle Ameno*: architecture framing landscape.
1996 Chromogenic colour print. 38.6 x 38.1 cm
Figure A.14 (right) Kitsch motif roaring stag
The subject was dropped.

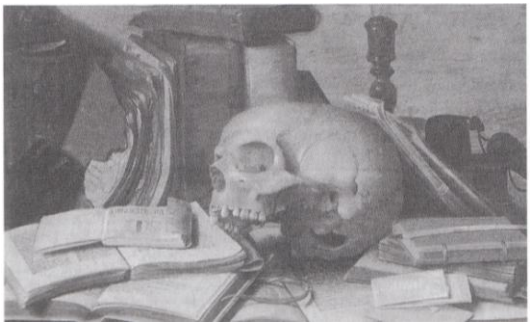


Figure A.15 (left) Thomas Ruff Newspaper Photo, Pieter Potter, Vanistas.
Memento Mori and melancholic topos: Vanitas still life by Pieter Potter.
1996 Chromogenic colour print. 18 x 23.5 cm
Figure A.16 (right) Thomas Ruff Newspaper Photo, Eduard Ender, Humbolt and Bonpland on the Orinoco.
The natural scientist Alexander von Humboldt painted by Eduard Ender.
1996 Chromogenic colour print. 26 x 34.5 cm

APPENDIX B

NOTES ON PHOTOGRAPHY

1920s and 1930s were the time photography gained political power and became the most important modern form of communication. With the impact of Bauhaus on European modernism, which denounced the aesthetic forms of the past and celebrated the machine, photography was claimed to be the most important form of representation and considered in the context of Modern. In fact, before the potential of the photo-eye was realized, it was just enough to photograph objects at eye level, standing with both feet firmly on the ground or clamped on a chair. The literary critic Ossip Brik (1888-1945) argued that "the task of the camera was not to imitate the human eye, but to see and record what the human eye normally does not see;" therefore, "the photo-eye can show things from unexpected viewpoints and in unusual configurations."[132] Concordantly, photographers offered complex angles of view that broke the usual referential relation between the camera and its subject. However, there was also the point that for Brik, that relation was already unnecessary, because the camera can function independently;[133] so does its product.

In this respect, it is illustrative to bring forward Alexander Rodchenko's photographs. Like many artists in Russia after the Revolution, the Constructivist painter and photographer Alexander Rodchenko (1891-1956) rejected the traditional mode of picture making that accord with Renaissance rules of perspective. By contrast with the compositions that projected straight views upon the picture plane, Rodchenko offered an innovative approach to camera angle.

[132] Ossip Brik. "What the Eye does not See," The photography reader. ed. Liz Wells, London; New York: Routledge, 2003, p. 90.

[133] Ibid.

Figure B.1 (left) Photograph by Alexander Rodchenko, At the Telephone, Moscow, 1928.
Source: Great Photographers. ed. by the editors of Time-Life Books, New York, 1971, p. 182.

Figure B.2 (right) Photograph by Alexander Rodchenko,
Pine Trees in Pushkin Park, 1927 or before. Gelatin silver print, 11.5 x 9 inches.
Source: Maria Morris Hambourg. "Photography Between the Wars: Selections from the Ford Motor Company Collection," The Metropolitan Museum of Art Bulletin, New Series, Vol. 45, No. 4, 1988, p.24.

As seen in the photograph above of a woman standing at a wall telephone, his radical viewpoint made ordinary scenes bizarre, and sometimes abstract. In another photograph, he framed a Moscow house in an unusual way; therefore, as Brik indicated familiar objects like balconies and ladder were transformed into a "never-before-seen structure."

Figure B.3 (left) Photograph by Alexander Rodchenko, Balconies, 1925.
Source: The web page of Masters of Photography: [last accessed: 22.11.2009] http://www.masters-of-photography.com/R/rodchenko/rodchenko_balconies_full.html
Figure B.4 (right) Photograph by Alexander Rodchenko, Fire-escape, from the series "House on Myasnitskaya," 1925.
Source: The web page of Moscow House of Photography: [last accessed: 22.11.2009] http://www.mdf.ru/english/search/authors/rodtchenko/3924.html?person=rodtchenko

Rodchenko built-up his technique of viewing subjects from above, below, or on the diagonal on his ideas that were carried over from his Constructivist painting. The editors of Time-Life Books have introduced Rodchenko in the book "Great Photographers" as follows:

> In 1922, he abandoned painting and turned to the camera, which he considered more relevant to the new technological society. Rodchenko sought to glorify all things technological by expressing fundamental geometric forms, particularly the circle and the axis line, and his oblique angles of perspective brought real objects to the verge of abstraction.[134]

[134] Great Photographers. ed. by the editors of Time-Life Books, New York, 1971, p. 182.

Figure B.5 Photograph by Alexander Rodchenko, Working with an orchestra, 1933.
Source: The web page of Masters of Photography: [last accessed: 22.11.2009] http://www.masters-of-photography.com/R/rodchenko/rodchenko_concert_during_work_break_full.html

By giving Rodchenko's point of view as example, Brik argued that the camera could see in ways which eye was not accustomed to, and could suggest new points of view and demonstrate how to look at things differently.[135] In that regard, photography offered new angles of vision both literally and metaphorically. Moreover, it was not only exploring unexpected angles, but also the rule of stability mentioned before between the object and camera was broken. Going beyond a prerequisite, de-stabilized setting of camera was agreed to be a creative input. As a result, a new kind of seeing was brought along with new perceptions on the formal geometry of the image that called Modernism. In that, technological developments played an unquestionable role. In the 1920s,

[135] Ossip Brik. "What the Eye does not See," The photography reader. ed. Liz Wells, London; New York: Routledge, 2003, p. 90.

technology afforded the experience of speed and travel through space and time, while motion became the keyword. Rapidly the camera, which was originally, camera obscura – a room for representation – become mobile and was carried with the photographer anywhere he went, recording whatever he saw.

Accordingly, in the early 1920s, to express the photograph as a literal representation in terms of a new mode of vision, László Moholy-Nagy (1895-1946) developed another technique called the photogram or camera-less photograph (independent of Man Ray's Rayogram[136]). Moholy-Nagy employed a moving light source as a creative agent to capture images of nature and to record the temporal movements of light.[137] A photogram is a photographic image made without a camera by placing objects - opaque or transparent - directly onto the surface of a photosensitive material such as photographic paper and then exposing it to a light source. The result is "a negative shadow image varying in tone, depending on the transparency of the objects used." László Moholy-Nagy claimed:

> The photogram, or camera-less record of forms produced by light, which embodies the unique nature of the photographic process, is the real key to photography. It allows us to capture the patterned interplay of light on a sheet of sensitized paper without recourse to any apparatus. The photogram opens up perspectives of a hitherto wholly unknown morphosis governed by optical laws peculiar to itself. It is the most completely dematerialized medium which the new vision commands.[138]

Moholy-Nagy regarded photography in the form of photogram as a "dematerialized" medium. Reminding the uncertainty in the beginning part of this

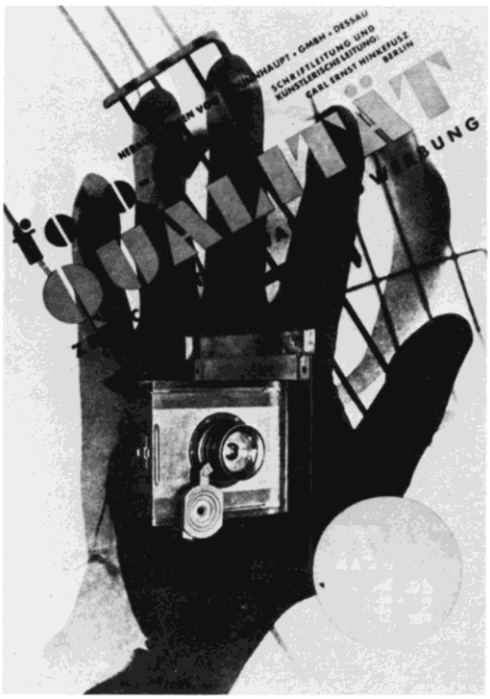
[136] Moholy-Nagy and Man Ray used the same procedure; yet Ray's images focus mainly on the objects on the paper and how they are arranged, stemming mostly from his Surrealist roots and his desire to make the everyday seem unfamiliar. Moholy-Nagy uses the objects as a secondary device, concerning himself more with how those objects shape and distort the light as it strikes the paper. By literally painting with light itself, Moholy-Nagy reduced image making to its very essentials and broke new ground for photography as an art form in itself.

[137] László Moholy-Nagy, 1969.

[138] László Moholy-Nagy. "A New Instrument of Vison," The Photography Reader, ed. Liz Wells. London; New York: Routledge, 2003, p. 92.

study regarding photograph's substance, matter, and form, another question can be raised upon photograph's materiality whether it can be de-materialized.

Seen from Nagy's perspective, photograph is indeed a material itself. It is a mechanical figure independent from the vantage point of camera. Yet, this results in the reduction of the camera process to a mere material layer. That is to say, photographic images can surely be defined as a "mechanical figure" which is produced instantaneously by the reflection of light; not produced by experience or consciousness.[139]



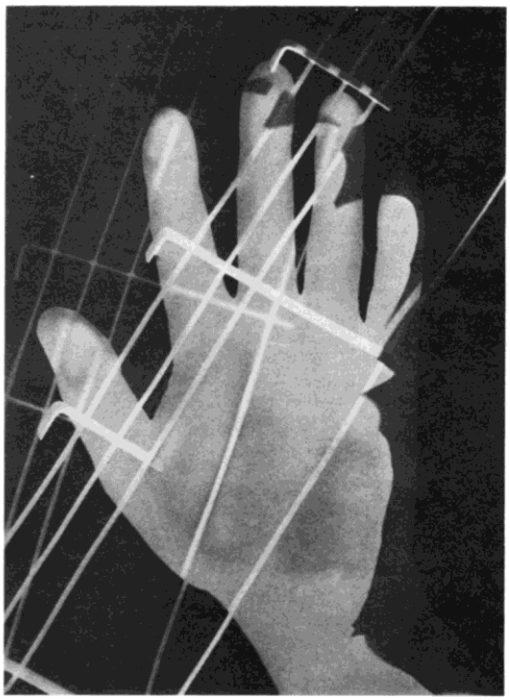


Figure B.6 (left) László Moholy-Nagy, The ttle page for "Foto-Qualitit"
Source: Rosalind E. Krauss. "When Words Fail," October, Vol. 22, the MIT Press, 1982, p. 93**.**

Figure B.7 (right) László Moholy-Nagy, Photogram, 1925-27.
Source: Ibid.

[139] John Berger, "The Ambiguity of the Photograph," in The Anthropology of Media : A Reader, ed. by Kelly Askew and Richard R. Wilk. Blackwell Publishers, 2002, p. 53.