PHOTOGRAPHY IN ARCHITECTURAL PERIODICALS: FORMULATING A TYPOLOGY FOR THE USE OF A SINGLE PHOTOGRAPHIC IMAGE PER BUILDING

A THESIS SUBMITTED TO THE DEPARTMENT OF GRAPHIC DESIGN AND THE INSTITUTE OF FINE ARTS OF BILKENT UNIVERSITY IM PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF FIRE ARTS

> By Taner SEKERCIOGLU

> > June 1993

terrer fil

11 11 19

PHOTOGRAPHY IN ARCHITECTURAL PERIODICALS: FORMULATING A TYPOLOGY FOR THE USE OF A SINGLE PHOTOGRAPHIC IMAGE PER BUILDING

A THESIS SUBMITTED TO THE DEPARTMENT OF GRAPHIC DESIGN AND THE INSTITUTE OF FINE ARTS OF BILKENT UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF FINE ARTS

Taner Sekercioglu

By Taner Şekercioğlu June 1993



B000523

I certify that I have read this thesis and that in my opinion it is fully adequate,

in scope and in quality as a thesis for degree of Master of Fine Arts.

Doç. Dr. İhsan Derman (Principal Advisor)

I certify that I have read this thesis and that in my opinion it is fully adequate, in scope and in quality as a thesis for degree of Master of Fine Arts.

Mand Prof. Witold Janowski

I certify that I have read this thesis and that in my opinion it is fully adequate,

in scope and in quality as a thesis for degree of Master of Fine Arts.

Doc. Dr. Nezih Erdőğan

Approved by the Institute of Fine Arts.

Prof. Dr. Bülent Özgüç, Director of the Institute of Fine Arts.

ABSTRACT

PHOTOGRAPHY IN ARCHITECTURAL PERIODICALS: FORMULATING A TYPOLOGY FOR THE USE OF A SINGLE PHOTOGRAPHIC IMAGE PER BUILDING

Taner Şekercioğlu M.F.A. in Graphic Design Supervisor: Doç. Dr. İhsan Derman June, 1993

The intention of this study is to analyze the interrelationship of photography and architecture, especially within the framework of architectural periodicals. A research is carried on how architectural experience is translated into a two dimensional visual form, and how it is perceived and understood. A thorough investigation of the leading architectural periodicals reveal the common editorial preferences, as well as the common problems. Finally, a typological series is formulated and proposed as a solution to the problems related to the use of a single photographic image per building mentioned in the text of the periodical.

Key Words: photography of architecture, architectural periodicals, perception of space, typology.

ÖZET

MİMARİ DERGİLERDE FOTOĞRAF: BİNA BAŞINA TEK FOTOGRAFİK İMGE KULLANIMI İÇİN BİR TİPOLOJİ ÖNERİSİ

Taner Şekercioğlu Grafik Tasarım Bölümü Yüksek Lisans Tez Yöneticisi: Doç. Dr. İhsan Derman Haziran 1993

Bu çalışmanın amacı fotoğraf ve mimarinin ilişkisini, özellikle mimari dergiler kapsamında incelemektir. Mimari tecrübenin iki boyutlu görsel bir forma dönüştürülme süreci ve bu sürecin algılanması ve anlaşılması araştırılmıştır. Önde gelen mimari dergilerin incelenmesi, fotoğrafların kullanımı konusundaki genel tercihleri belirlediği gibi, varolan problemleri de ortaya çıkarmıştır. Son olarak, oluşturulan tipolojik bir seri, dergi metni içinde bahsi geçen her bina için tek fotografik imge kullanılması ile ilgili problemlere çözüm olarak önerilmektedir.

Anahtar Sözcükler: mimari fotoğraf, mimari dergiler, mekansal algı, tipoloji.

TABLE OF CONTENTS

1	Introduction	1	
2	Photography of architecture	8	
	2.1 Historical evolution	9	
	2.2 Photography of architecture as a professional genre	19	
	2.3 Characteristics of photography of architecture	20	
3	Representation of architectural reality through		
	photographic reality	26	
	3.1 Perception	27	
	3.2 Architectural reality: three-dimensional experience	30	
	3.2.1 Perception of space	31	
	3.3 Photographic reality: two-dimensional experience	32	
	3.3.1 Perception of photographic space	34	
4	Attitudes towards the use of photography in		
	architectural periodicals	39	
	4.1 Historical evolution	40	
	4.2 Editorial attitudes	44	
	4.2.1 Image layout: cropping and sizing	46	
	4.2.2 Chromatic choices	47	
	4.2.3 Interrelationship of text and image	48	
	4.3 Attitudes towards the use of a single photographic image		
	per building	49	
	4.3.1 Placement and density within the periodical	49	
	4.4 Problems related to the use of a single photographic image		
	per building	57	
5	Formulating a typology for a photographic series for architectura	1	
	periodicals	59	
	5.1 Definition of the term 'typology'	59	
	5.2 Rationale for a typological series	60	
	5.3 Characteristics of the typology	61	
	5.4 Explanation of the work	64	
6	Conclusion	71	
No	otes	73	
Ap	Appendix		

LIST OF TABLES

Table 1	Attitudes towards using photographic imagery	79
Table 2	Attitudes towards using single images	80

LIST OF FIGURES

Fig. 2.1	Elevation (from <i>The Builder</i> , 1843)	9
Fig. 2.2	Perspective (from The Builder, 1843)	9
Fig. 2.3	Elevation (Paris, 1851)	10
Fig. 2.4	Perspective (Paris, 1851)	10
Fig. 2.5	People in photographs of architecture (ca. 1890s)	13
Fig. 2.6	Elevation (Walker Evans, 1931)	15
Fig. 2.7	Perspective (Ken Hedrich, 1938)	16
Fig. 2.8	Elevation (Ezra Stoller, 1951)	17
Fig. 2.9.	Perspective (Ezra Stoller, 1951)	17
Fig. 2.1	D. Without perspective correction	22
Fig. 2.1	L. With perspective correction	22
-		25
Fig. 3.1.	Ames' Room, diagram	35
Fig. 3.2.	Ames' Room, photograph	35
Fig. 3.3.	Ames' Room, layout	30
Fig. 4.1.	Albumen silver print glued to printed page (1861)	42
Fig. 4.2.	Halftone printed page (1902)	42
Fig. 4.3.	'News' page (from <i>Mimarlık</i>)	50
Fig. 4.4.	'News' page (from Progressive Architecture)	51
Fig. 4.5.	'Portfolio' page (from Tasarım)	53
Fig. 4.6.	'Portfolio' page (from Architectural Record)	54
Fig. 4.7.	'Article' page (from Architectural Review)	55
Fig. 4.8.	'Article' page (from <i>Mimarlık</i>)	56
Fig. 5.1.	Photograph (Faculty of Business Adm.)	65
Fig. 5.2.	Photograph (Faculty of Fine Arts, Design and Arch.)	66
Fig. 5.3.	Page layout (horizontal)	67
Fig. 5.4.	Page layout (vertical)	67
Fig. 5.5.	Typological unit	69
-	•• •	

Through photography, we can participate in new experiences of space, and even in greater measure through the film. With their help, and that of the new school of architects, we have attained an enlargement, and sublimation of our appreciation of space, the comprehension of a new spatial culture. Thanks to the photographer, humanity has acquired the power of perceiving its surroundings, and its very existence, with new eyes.

Laszlo Mohoły-Nagy

From Pigment To Light, 1936

1 INTRODUCTION

Of all the languages in the world, none is more universal and believable than the language of photographic pictures-images made on a light sensitive surface. The influence of photography in our lives is of unbelievable magnitude. Photography is involved directly or indirectly in nearly all we experience: teaching, explaining, entertaining, revealing the unseen, expressing our feelings and desires, and even deceiving us.

In its relatively short history, photography has reached unpredictable popularity. The reason for this popularity, partly, was because from the first day on, it was believed to be the most reliable means of reproducing truth. "From this day painting is dead" declared the painter Paul Delaroche in 1839¹, for he was among the large number of artists fearing photography would replace painting. In the turn of the 19th century, it was commonly believed that painting's highest aspiration was the faithful reproduction of the world. However, the new invention started performing that job with results hitherto unknown, which seemed to be totally objective and free of human error. Photography was promising truth that no other method of representation had ever given.

The society which was at first charmed, fascinated and even a little intimidated by this new invention, soon became addicted to it. Photographs stepped into daily life, and in time, they took over. Within a few decades, it was impossible to imagine a life without them. Vicki Goldberg, a writer and theoretician of "Western culture was in the process of being reinvented just as photography came to light. New opportunities, new wealth, a new merchant class were slowly changing the structure of society, and in the wake of the American, French, and industrial revolutions, ideas of entrepreneurial freedom and individual worth had begun to take root. The potential for information gathering and distribution exploded at the very instant that such cultural change made expanded information desirable."²

Photography's expansion took place with enormous speed. In 1855, only years after the formal announcement of the invention in Europe, the daguerreotypes made in the state of Massachusetts, in one year, has reportedly reached a number of 400,000. And this number grew to be , an estimated 41,000,000 photographs per day-for the whole of the United States-in 1990s.³

The medium's credibility and appreciation as a trustable form of truth was not the only reason for this popularity. Technological and scientific advances, which in the end made it possible for everyone to produce photographs without any previous education or training, also played an important role on this. Today people are familiar with photography and accept this communication medium. Every family seems to have at least one camera and people at every age, everywhere, are making photographs.

Photography, in daily life, is omnipresent. The number of photographic images an average man is exposed to everyday through newspapers, magazines, billboards, ads, television and other media is countless. The professional and educational fields have all taken their share of the infiltration of photographic images into every aspect of life. In this dissertation, architecture, in particular, is the specific case to be mentioned. The interrelationship of photography and architecture is as old as photography itself, since the latter has always been a popular subject matter for the former. Cervin Robinson, an architectural photographer, historian and critic, states architecture as one of the classic subjects of photography, along with portraiture and landscape.⁴

The idealism of the 18th and 19th centuries in architecture required longlasting trips to far lands to experience both ancient and contemporary masterpieces. With photography though, this came to an end; architects started to 'experience' other buildings without even leaving their offices. And with the technology enabling photographs to be printed directly on magazine pages, photography evolved into a mass communication tool, affecting or even creating architectural tendencies and styles.

Towards the end of the first half of the 19th century, a lot of photographs of buildings were taken only due to technical difficulties such as long exposure durations, excessive lighting conditions, etc. In the second half of the 19th century, on the other hand, a conscious demand is observable, a demand requiring photographers to shoot architecture for assignments. It is during these years that the first periodicals of this highly respected profession of the century came to life, together with photographs printed on the pages, employing the most advanced techniques of the time.

With the modernist approaches, dating around after the turn of the century, photography became more intimately related with architecture and architects, acting as the propaganda weapon for the innumerous styles reigning the first decades of the 20th century. And in the second half of the 20th century, to quote Fisher, 'architecture has become inseparable from the photography of it.'⁵

There are innumerous periodicals published throughout the world, dealing with various subjects in the profession of architecture. Each and every one of these periodicals use photographic images to visually communicate their messages to the readers. Every publication, naturally, has a different approach to the way it employs photography on its pages.

The different approaches may be observable through different editorial preferences, such as chromatic choices (i.e. black-and-white or color), the graphic relations between the photographic images and the text, the number of, or rather the density of photographic images throughout the pages, and last but not least, the choice of subject matter in the photographs. However, no matter what these preferences are, some problems remain common.

A frequently applied attitude in architectural periodicals is the use of a single photographic image for a building mentioned in the related text. This attitude brings along with itself certain problems, and these problems form the fundamental outlet for this dissertation.

In this study, photography is discussed not only as a medium of communication, but also as the most exploited one for purposes of architectural representation. The way photography has influenced architecture, and the way architects have come to regard it, are argued with one basic question in mind: how can the gap between the perception of actual space and the perception of a two dimensional image of space be narrowed down ?

This gap may very well be wide open in the case of fashion and advertising photography for example; however, when it comes to architecture it is much more serious. The problem discussed here can be summed up best with John Donat's words: "However widely travelled you may be, it is a safe bet that you know more architecture through photographs than by direct experience... Because architectural photographs are a substitute for the experience of buildings for most of us, it is far more important for a photographer to recreate that experience through the lens than to take a few perfect and beautiful photographs... This may explain why you often get such a shock when you visit a building for the first time that you *thought* you knew intimately from photographs: it is completely different from what you expect."⁶

At this point, some limitations which the following text imposes on the reader should be mentioned. Some key words, which are used throughout the text, are to be taken only by part of the wide spectrum of meanings they express. The word 'image', for example, applies only to photographic images, just as the word 'representation' applies to representations made only by means of photographic process, unless of course otherwise mentioned. This is a precaution taken in order to avoid unnecessary repetitions.

Another limitation surfaces clearly in Nazif Topcuoglu's judgement on reading photographic messages:

"A ... photograph (or a sequence of photographs) can suggest or emphasize the feeling of space or some of its dominant aspects better than any other medium. The primary contenders are cinema and video, but photographic prints have the superiority of timelessness, as opposed to the transiency of these media, which makes deeper concentration, reflection and comparison possible. That is of course, if one wants to read the message and is willing to spare some effort for it, in other words, to get actively involved."⁷

Since all the imagery to be discussed in the following chapters belong to a branch of professional magazines, the observers of these images are assumed to be already actively involved with them. While mentioning the relationship between the image and the observer, it is safer to state in advance that there is no chance factor, in other words, neither are the images in this paper billboard photographs, nor is the observer the man on the street. Quite the contrary, the images are produced, edited and published by professionals, to be consumed by professionals as well. For this reason, instead of 'observer', the word 'receiver' is going to be used throughout the following text. The target mass of architectural periodicals, and therefore the receivers in this case, are architects, architecture students, and people from other professions who are in related positions with the subject.

A lengthy discussion of photography of architecture opens the text, with emphasis on its evolution as a professional genre. In this chapter, certain aspects of photography of architecture, which turned out to be conventions in time, are also pointed out, in relation to their contribution to the decoding process of the photographic message.

A discussion on the representation of architectural reality through photographic means follows in the second chapter, which is based on the perceptual processes mentioned in the first section. Spatial experience is investigated in detail, and photographic literacy regarding architectural subjects is taken into account. Different interventions in the process of transformation of the object into a two-dimensional image on the page, and back into the object in the receiver's mind are also explained in this chapter.

The third chapter deals mainly with the use of photography in architectural periodicals, starting with a note on its historical evolution. Different editorial attitudes, and problems related to them are discussed next. But specifically, the problems evolving from the use of a single photographic image per building

are investigated in detail.

Finally, the fourth chapter is an attempt to formulate a typological series for an anonymous architectural periodical, aiming to produce a solution to the problems pointed out in the previous section.

,

2

PHOTOGRAPHY AND ARCHITECTURE

From the time of the Renaissance many artists had used the camera obscura⁸ to draw forms and linear perspective accurately. But it was not until the first half of the nineteenth century that several researchers, working independently of each other, found ways to capture the image permanently.

Although photography is now so much a part of the visual world that it is taken for granted, it is a relatively recent invention. The formal announcement of the invention was made in 1839, and for a short time it was considered an interesting new application, which seemed however, expensive and troublesome. Moreover, nobody was sure that it would be useful in the long run. Even though it gained recognition with a degree of doubt in the beginning, as most other new technologies also have been, it did not took very long for photography to prove itself. In a decade, photography became cheaper, easier, and reproducible; and because of these improvements it was commonly accepted. With its ability to produce pictures with wholly accurate proportions and precise renditions of details, photography ideally suited to the representing of architecture. And in turn, architecture was an ideal subject, too; for buildings unlike other subject matter of the period, could pose patiently for the very long exposure durations required by the early emulsions. As a result, it comes as no surprise that from the first years on, architecture and photography broke into a strong relationship that flourished ever since.

8

Historical Evolution

The first years of photography's history passed with technical and artistic experimentation. A major turnpoint was 1851, the year which photography proved to be a promising new profession. In fact, 1851 was a year of many first-of-its-kind incidents: the first exhibition of photographs of architecture, the first photographic printing establishment which could mass produce prints in large quantities, the first official assignments for photographers for documenting architecture, the first photographic album, and the first periodical dedicated to photography.

The subject matter of early photography of architecture was predominated by historical buildings, since the architecture of the period was itself dominated by historical revivalist attitudes. During these years, images of Roman and Hellenistic architecture, together with images from the far cultures of Africa, Middle East, and Asia, started to flow to the European capitals.



Fig. 2.1. Elevation (from *The Builder*, 1843)



Fig. 2.2. Perspective (from *The Builder*, 1843)

Photographs of these early days were influenced by then contemporary drafting, since most of the photographers of the time were previously trained as draftsmen. The two major approaches in drafting were quickly adopted to photography. One is the *elevation*, which is a head-on and centralized view of a facade with minimal information about the context. [Fig. 2.1.] The other is the *perspective*, which by placing the building diagonally creates an illusion of three-dimensionality, enriched by contextual clues such as trees, vehicles, and especially people. [Fig. 2.2.]

The photographic versions of these two approaches applied the same intentions; the elevation trying to present an objective, undistorted, informative view of a facade whereas the perspective attempting to recreate the actual experience of visiting the building. [Fig. 2.3. and 2.4.] And oddly enough, deliberate choices between one type or the other were generally made while photographing a building.



Fig. 2.3. Elevation (Paris, 1851)



Fig. 2.4. Perspective (Paris, 1851) When compared with other methods of architectural representation, photographs were more accurate in proportions and had precise delineation of details. As a result, reliability and fidelity in documentation, not to mention its rapidity, became photography's first globally accepted feature. It was in 1844 when Henry Fox Talbot wrote:

> "Even accomplished artists now avail themselves of an invention which delineates in a few moments the almost endless details of Gothic architecture which a whole day would hardly suffice to draw correctly in the ordinary manner."⁹

Goldberg explains the same situation as:

"Before photography a certain laxity in matters of realism had been perfectly acceptable. Faithful copies had been as faithful to the conventions and prejudices of their time as to the object themselves. A seventeenth century engraving of Notre Dame, for example, eliminated the cathedral's Gothic irregularities by making it more symmetrical and rounding its pointed windows. An 1836 lithograph of Chartres reversed the procedure by stretching that church's rounded windows up to Gothic points. Then photography stepped in with an immutable reality; it left the windows intact, no matter which style the photographer favored."¹⁰

Thus, many architectural firms started forming their own collections of photographs, mainly to be used as design inputs in their revivalist creations. However, photography was still considered as a pure technical expertise, and hence when from time to time such collections of photographs of architecture were to be exhibited, it was the architect, not the photographer, who signed -and thus, owned- the photographs.¹¹

The most significant reproduction systems of the 1870s were collotype and

photogravure. These techniques generally produced an exaggerated contrast at the edges between tones in a picture, which ended up as reproductions that seemed infinitely detailed. This feature enabled photographs, that were printed and published in this manner, to gain a credibility of truth, equalling to that given to a detailed architectural drawing.

The truth value of these images were so relied on that suddenly there emerged a demand for photographs of contemporary architecture, and the buildings of successful architects started reaching hundreds of architectural firms by means of distributed photographs. Still very young, photography proved itself to be a very strong medium of communication in late 1870s when an architectural style in the United States was named after an architect: Richardsonian Romanesque.¹² Considered as one of the fundamental characters in the architectural history of the United States, H. H. Richardson created the first examples of this style, which then was imitated throughout the continent by the help of photographs.

During the first period of the history of photography of architecture, which dates between 1839 and 1880 according to Robinson's classification¹³, the most striking feature observable was the common effort to mass produce photographic images so as to make them available to the widest possible audience. The period terminated in around 1880 with the invention of the halftone process, a very important achievement in the mechanization of reproduction of photographic images.

Although the publication of original photographs mounted on bound pages was common before the eighties, reproduction systems that allowed photographs to be printed quickly, cheaply, and permanently in ink, made the publication of a new category of photography possible, namely that of images of nonmonumental architecture. Even the photographs of unapproved buildings were being printed, providing valueless illustrations for architectural criticisms, which until then had to be printed without any accompanying images. Nonmonumental or unapproved architecture was avoided from the photographic imagery of the period due to a general acceptance that only masterpieces and monumental architecture was worth the time, effort and expense given to the older reproduction techniques.

Developments in emulsion technology provided other important changes. What has been a permanent need in architectural imagery was now possible because of increases in emulsion speeds which resulted in decreases in exposure durations: inclusion of people in the photographs. After 1890s images with carefully placed and posed people appeared in publications, providing both experiential clues and scale. [Fig. 2.5.]



Fig. 2.5. People in photographs of architecture (ca. 1890s)

Partial croppings of the subject also date back to these years. Before, a definite

loss of light and definition was observed towards the edges of the negative, and consequently the buildings to be photographed were placed dead in the center, at a safe distance from the sides, to avoid this loss. With the new camera and lens designs though, it became possible to produce photographs with consistent tonal values throughout the frame, which enabled more independent compositions.

Another special characteristic of the newer style of photographs, together with the inclusion of fragmentary views, was the emphasis on light quality. The contrasty and drawing-like traits of the former processes avoided the accentuation of the light, whereas both the new reproduction techniques and the new equipment, which were released around the turn of the century, supplied enough freedom in recording light quality. The new fast lenses especially enabled images to be shot at dusk, in the rain or snow, which were fresh and innovative attitudes of the time.

In the first two decades of the 20th century, photographers using fragmentary views, and giving emphasis on the light quality, also strived for summing up their time, or their society in their works. As a result, a certain vagueness, created by the intervention of these 'artistic' criteria, took over photographs of architecture, which up to now had a pure documentary nature.

In the 1930s photographers got rid of much of the artistic self-consciousness of the previous decade and photography became a purposeful tool once again, as in the last decades of 19th century. The thirties and the following decades after the World War II continued to be marked by the same split that had started in the 1890s between professional and amateur; and this Robinson explains as:

"This schism that fell between those who took pictures of vernacular

and historical buildings and those who took contemporary architecture might fall between some photographers who took pictures 'for themselves' and others who worked for the architectural profession or might fall between magazine editors who took occasional pictures they used and the professionals they hired to take the rest. Professional work was marked by the use of large cameras and clever perspectives; the other by the use of naive perspectives (head-on, say) with either large cameras or small cameras intended for amateurs.¹¹⁴

During the thirties it became apparent that the experiential and the factual perspectives that had started out in the mid-nineteenth century as versions of two kinds of architectural drawings, had again changed their meanings and would begin to change them once more in the forties. In fact, during the 1930s the head-on perspective was adopted by the amateur (the artist) whereas the experiential oblique perspective was used by the professional to sell the International Style. [Fig. 2.6. and 2.7.] The two perspectives were brought together in the early 1950s in a flexible style in which the new architecture of the postwar period was presented. [Fig. 2.8. and 2.9.]



Fig. 2.6. Elevation (Walker Evans, 1931)



Fig. 2.7. Perspective (Ken Hedrich, 1938)

One of the problems, especially in the States, photographers faced was the great height of some new buildings and the small scale of decoration on them. A general view of such a building revealed nothing of the decoration on the building, on the other hand when such detail was taken with a long lens its function on the building was lost. One obvious solution was to give up trying to keep verticals parallel and to point the camera up at a building from the street below it. Such perspectives as worm's-eye views, together with bird's-eye views, were other features of the new flexible style created in the forties.

World War II stopped many photographers from working, some mainly because they could no longer obtain photographic supplies but others because the armed services in which they found themselves did not make use of their skills. With the resumption of construction, in the United States especially, after the World War II, there rose a need once again for architectural imagery, that would handle articulately the increasing number of significant new buildings.



Fig. 2.8. Elevation (Ezra Stoller, 1951)



Fig. 2.9. Perspective (Ezra Stoller, 1951)

Juxtaposition of not only plants and trees, but also sculpture and industrially designed objects to buildings, was a common feature of architectural imagery of the 1950s. Photography of architecture as a language of photojournalism reached maturity in the 1960s, going through slow but definite changes starting from the 1930s on. However, in early 1970s, with the introduction of color to photography, things started to work back towards the thirties again. Robinson explains this phenomenon as:

"Technical development is clearly present in photography, but technical progress is harder to argue for... At the beginning of the 1970s, thanks to the use of smaller cameras and faster black-and-white films, magazine photographers were able to include unposed people in virtually any architectural photograph; at the end of the seventies they were using color film that had a fraction of the speed of black-and-white film, and they were 'bracketing' exposures. If they repeated a picture on four sheets of film at four different lens openings to make sure they ended up with one correct exposure, the chance that the picture with the best arrangement of pedestrians and vehicles in it would also be the best exposed was only one out of four... Thus color formed a trap."¹⁵

Other reasons also existed for this trap. For example, for each picture the photographer took, he or she now had to produce a set of films: a transparency for the journal and black-and-white or color prints and color slides for the architect. Moreover, due to the incompatibility of color films to different sources of light simultaneously, multiple exposures had to be done on each sheet of film in order to reconcile various kinds of light.

The use of color films became virtually universal, in part because the technology of color reproduction improved and in part because color was a seductive medium that advertisers encouraged journals to use on their editorial pages.

Photography of architecture as a profession

In the case of architectural imagery for professional means, Robinson states that:

"...the subject is something given and what photographers elect to do with it is their accomplishment and reflects their style. Moreover, we can perceive that the architectural community has made demands and can recognize -as we are unlikely to in fashion and landscapewhere they have succeeded in fulfilling them and where not."¹⁶

As it has been explained in the previous pages, architects, from the first days on, were aware of two special attributes of photography: rapidity and accuracy. So they immediately started making use of the new medium, and shooting architecture for professional assignments became in the first half of the 20th century and continues to be still today, a profession of extreme specialization.

A photographer of architecture is many a different person to many people. For the historian, he must produce precise photographs of a building for use as documentary images. For the architect, he must be able to translate a three dimensional achievement into an effective two dimensional presentation. For the editor, on the other hand, he must take an unfinished building and turn it into a masterpiece on the page.

Three main customer groups, therefore, exist for the photographer specializing in architecture: the historians and institutions, the architectural firms, and the architectural press. In the case of this dissertation, the customer is a branch of the architectural press, namely the architectural periodicals.

Robinson defines the professional photographer of architecture as:

"The task of an ambitious architectural photographer ... had always been and continues to be to our day: to produce a print of sufficient physical quality that one's work is taken seriously, to get ahead of the pack of one's fellow photographers by some aesthetic act, and to remain in the public eye thereafter with a recognizable, individual style."¹⁷

Characteristics of photography of architecture

There are some characteristics of photographs of architecture produced by professionals which separate them from other photographs that take in architecture as a casual subject. Architectural photography is a conservative profession which adheres strictly to preestablished rules and conventions. Fisher, on this point, observes:

"...architectural photography does follow a fairly strict set of conventions. What those conventions are, why they exist, and what effect they have on the way we think about architecture are all questions that have received little attention within the architectural profession, which serves as the primary client group for this photography, or in the architectural press, itself the major outlet for this work."¹⁸

These conventions are mainly about the intervention of the photographer to the final image, through the camera and other physical criteria he or she holds in control during the shooting. Although there were outbreaks from time to time, the conventions remained dominant in photography of architecture, differentiating it from the other fields. Fisher concludes on this feature as:

"Architectural photography, as a result, has essentially remained a Modernist art form. The Postmodern liking for juxtaposition, contradiction and the messy vitality of real life seems to have had little impact on the genre. Whether the conservatism of such photography stems from its marketing role or from its growth during the Modern Movement is difficult to say."¹⁹

Regarding the purpose which they will be put to use, photographs of architecture are studied in three groups by Eric De Mare²⁰, and these groups are:

the *Record* (made for surveying purposes, to provide as much accurate documentary information as possible),

the *Illustration* (a satisfying record which also makes a pleasing picture in itself, revealing the building in a way as attractive as possible),

the *Picture* (the architectonic design which is not concerned with the record, but attempts to create a work of visual art).

Considering this classification, it is clear that the client groups for the three categories are different -though may still overlap with each other. Historians, antiquarians and restorators are the customers for the *Record*, and architects are the customers for the *Pictures* -of their buildings. The *Illustrations* are what really provides the living for the architectural photographer because the editors are the customers to them. And also, this group of photographs of architecture forms the center of attention of this study.

Discussing the photography of architecture as the *Illustration* has two sides in permanent relationship with each other. One side of this discussion deals with the production process of the photograph, which this chapter is mainly interested in, while the other deals with the consumption process, which is the topic of the next chapter.

It is necessary to discuss the conventions that Fisher talks about in order to conclude the discussion on the production process, and when those conventions

21

are mentioned the primary subject to be investigated is *perspective correction*. The term applies to the optical correction of the vertical lines, and in some cases horizontal ones, too, to be rendered as parallel by the help of the mechanical parts of the camera. This optical correction is necessary partly due to the dominance of the perspective drawing prescriptions present in architectural representation since the Renaissance, and partly because of the visual perception processes, which are to be discussed in the following pages. An uncorrected perspective reveals buildings as reclining, which is not the way people got used to thinking about buildings, and not the way they perceive them either. [Fig. 2.10. and 2.11.]



Fig. 2.10. Without perspective correction



Fig. 2.11. With perspective correction

Other conventions seem secondary and not so imposing when compared with the power perspective correction has over the genre of architectural photography; however they do exist. Molitor, noting on how to 'pick out recognized architectural photographers' work from that of the commercial photographers', lists them as:

> "...skies and foreground were invariably darker, drawing the eye immediately to the building. The perspective was usually dramatic, not the usual 45 degrees showing both sides of the building... Texture of all surfaces was evident, and shadows revealed setbacks and projections. A good set of photographs shows a building in relation to its surroundings but even here a certain amount of isolation is necessary. Wires and poles must be avoided, church steeples and tall chimneys must not project from unlikely places, and automobiles should not dominate the foreground. Nothing dates a photograph quicker than an old model car in the foreground. Interiors must have a logical, orderly arrangement of furniture... And last, but not least, the print quality must be excellent. There must be a full range of tones between the brightest highlight and deepest shadow."²¹

Although this list is not a rules-to-obey kind of classification, it sums up the apparent common characteristics of a 'successful' architectural image, 'successful' in the sense that it has been rewarded by being published. One feature that stands out is that with no doubt black-and-white photography is considered the medium of the serious photographer and the choice of the serious editor as it can easily be deduced from the last item of Molitor's requisites. There are some arguments against the monochrome photography of architecture. Donat, for example, argues that:

"Because all media were black-and-white to begin with, a whole generation of architects grew up color blind. The monuments of the Heroic Period were disseminated to the majority through blackand-white pictures although the buildings themselves were full of color. I am suggesting that black-and-white architecture (i.e. the International Style) was an unwitting product of black-and-white photography."²²

What Donat overlooks is, of course, that monochrome was the only technology then available for mass communicating architectural imagery through publications. Moreover, although color technology, of both producing photographs and printing them, has advanced greatly beginning from the early 1970s, today a majority of photographers and editors still prefer black-and-white. Even though the advertisers and the viewing public expect color, the crisp, detached aura of superior black-and-white reproduction still reveals more of a structure's composition, texture and form.

A surprising fact is that Molitor did not place in his list how photographers should employ people in their images. Probably because he did not even feel the need to mention people being part of architectural imagery. It is considered an old habit to shoot architecture without people. Donat suggests that this preference for empty buildings comes from the days when it was impossible to shoot buildings with people because of the very long exposure durations, and goes even further to say:

"One scruffy live picture is worth ten perfect dead ones."²³

People are mainly needed, most photographers admit, to give scale to a particularly scaleless building, or to give some life to large public spaces. A 'live picture' with people therefore, although dating the photograph, suggests clues on the experience of architecture, which should be the fundamental aim of both the photographer and the editor. Donat, having gone through all characteristics of architectural photography in his article, sums up the basic necessities, whatever the conventions are, in four simple requisites:

"Reveal the environment.

Suppress subjective abstractions.

Allow people to inhabit pictures.

If someone sees the photographs and then visit the building, he should feel he has been there already."²⁴

The point Donat tries to stress is that the photograph should in every respect be as close to the actual experience of architecture as possible. What that experience is, and how it can be read from the photographs are topics to be discussed in the following sections.

3

REPRESENTATION OF ARCHITECTURAL REALITY THROUGH PHOTOGRAPHIC REALITY

John Hejduk, in the introduction he wrote for photographer Judith Turner's book, states:

"There are many kinds of architectural realities and interpretations of these realities, which include the major issue of representation. Whatever the medium used -be it a sketch on paper, a small-scale model, the building itself, a sketch of the built building, a model of the built building, a film of the built building, or a photograph of the above realities- a process is taking place. Some sort of distortion is occurring... which, in turn, has something to do with the interpretation and reinterpretation of space."²⁵

The architect can make drawings on a two-dimensional sheet of paper, all being representations of proposed designs, in fact all being illusions regarding space and depth. The next step may be the making of a scale model, which also is illusionary. Then the architecture itself is built and it too is a realization based on another reality. After the work of architecture has been built further representations are possible, including drawings, models, films and photographs.

This transformation that the architectural reality goes through, in the form of a photographic image viewed by a receiver, should be thoroughly investigated in order to understand the problems related with the perception of these images.
The first step in this transformation is the experience of the actual building, in other words, the spatial experience of a specific piece of architecture. It was stated earlier that the photograph is a substitute for this experience, and naturally, in this case, that experience belongs to the photographer. Observing this fact, Busch states:

"The architectural photographer... is in a position of undeniable responsibility, for it is often through his eyes that we see the built world. His focus is ours and his frame is ours, and frequently, the images we remember most clearly are images he has built with great deliberation."²⁶

After the photographer's job is finished, the editor takes over, and creates the next step in the transformation process. And consequently, following the publication of the periodical, comes the final step: the architectural experience perceived by the reader from the printed image. The most important variable in this transformation, by all means, is the perceptual process.

Perception

Without exception, everything is a source of stimulation, and all beings, animal or human, detect them by sensitivity to such stimulation. How they do so is the problem of perception.

Obtained perception, in James Gibson's words, "arises from the classical sense organs when they are oriented to the environment by way of the body and when they are active, that is, when they adjust and explore so as to obtain information."²⁷

Gibson's main interest, therefore, is the acquirement of information through

active perception by means of the senses. For a long time, two assumptions have been made about the senses, first that they are the only sources of knowledge about the world and second that they are channels for special qualities of experience. Gibson overlooks both of these assumptions and prefers to conceive the external senses as interrelated active systems instead of mutually exclusive and passive channels.²⁸

There are five perceptual systems according to Gibson and they are the orienting system, the auditory system, the haptic system, the taste-smell system, and the visual system.

The vestibular organs of the inner ear pick up forces of acceleration, which specify the direction of gravity and the movements of the body. This enables the basic *orienting system* to keep the body upright, or inform the muscles otherwise. This system cooperates with all the other perceptual systems, providing a frame of reference for them, since the orientation of other perceptual organs depend on the upright posture of the body. Especially when the orientation of the head to gravity and to the ground is considered, the importance of the orienting system providing a stable platform for the direction of the organs of the head can be conceived; the organs of the head meaning the ears, mouth, nose, and above all, the eyes. Thus, the perception of external space, the three dimensions, distance, is only possible with the interactive coordination of the basic orienting system with the other perceptual systems.

The sense organ for hearing is commonly considered to be the ear, however, the perception of sounds involves listening, not just hearing. The *auditory system* actually includes two ears together with the muscles for orienting them to a source of sound. The complete system is bilateral, with the ears as primary receptors fixed on two sides of a mobile head, enabling the rapid location and

identification of a sound.

The *haptic system* has no sense organs in the conventional meaning of the term, but the receptors in the skin tissue, together with the receptors in the joints, are literally everywhere, making the hands and other body members active organs of perception. The word haptic actually comes from a Greek term meaning 'able to lay hold of'. By laying hold of something, a person can detect its size, shape, surface texture, material substance, and relative temperature. However, hands are not the sole possessors of these abilities, the feet and the other extremities are also quite capable, especially when the whole works in coordination to perceive body movements in relation to spatial experience.

The nose and the mouth may be justly regarded as distinct sense organs, but the perceptual process of the two often break into collaboration to make a superior system. The *taste-smell system* is mainly responsible for the detection of chemical values of the environment.

Eyes, together with the nervous equipment to back them up, form the *visual system*. The act of seeing, primarily, involves a response to light. In other words, the most important and necessary element in the visual experience is the element of tone. All of the other visual elements (line, color, shape, direction, texture, scale, dimension, motion, etc.) are secondary and depend upon the basic existence of light in order to be perceived. The perceptual stimuli of the visual system is superior to other systems, and in case of a controversial situation, between the visual and haptic systems, for example, the dominant reaction is to what the eyes perceive.

All these five systems work in collaboration to supply the human mind the

necessary information about the environment.

Architectural reality: three-dimensional experience

Architecture is experiential and architectural experience requires all sensations of the body. It can be looked at from different distances, walked around or in, and observed from different angles, in different lights, and at different times of the day. Besides being seen, architecture can be touched at, heard, smelled, or even tasted in extreme cases. In order to understand architectural space fully, the experience created by the collaboration of all the perceptual systems is necessary.

Apart from the association of the physical sensations, architectural experience challenges deep psychological roots, too. Colin St. John Wilson, quoting Kant's statement that "all our consciousness is grounded in spatial experience", mentions two psychological positions sustained in infancy; the complementary nature of these two modes of experience being the basis of all further spatial experience:

"From the moment of being born we spend our lives in a state of comfort or discomfort on a scale of sensibility that stretches between claustrophobia and agoraphobia."²⁹

The first position is identified as an intimate and protective gesture of an *envelopment* with the mother. The nature of this mode of experience is spatial, physical, tactile, and thus, this position is closely analogous to the architectural experience of the interior space. It is argued that this position of *envelopment* is followed by a shocking change to the contrary position of *detachment*. This experience is a mode in which the infant becomes aware of his or her own separate identity, the beginning of objectivity and self-sufficiency. The architectural analogue for the position of *detachment*, therefore, lies in the

experience of open space and the external confrontation of a building. These two psychological positions form, in Wilson's words, "the primordial domain of experience"³⁰ that initiates the experience of space, which throughout a life time is recreated in many different modes by the help of the perceptual systems.

Perception of space

The entire human perceptual system can be seen as being related to living in a spatial environment. It is in such an environment that human sensory capabilities become essential: the accurate perception of objects and space, the ability to know and adjust the orientation of one's own body in space, the ability to locate and to identify incidents, and the capacity to remember, recall, and communicate the location of things. All of these spatial perception abilities depend on perceiving information about things both internal and external to the body.

In regards to conceiving a spatial environment, the visual system is responsible for most of the job, which is, as stated earlier, made up of the two eyes and the surprisingly capable nervous equipment to back them up.

The two eyes have slightly different visual fields and this condition is called binocular disparity. However, the two different retinal images are fused into a single image by the brain with an unconscious process, which enables the perception of depth, and so, the third dimension. It is possible by means of this image fusion, therefore, to understand the distance of an object from the body or the distance between objects, which provides information relating the perceiver to the space he or she is in.

In the study of visual perception, it is the appearance of things that is the focus

of attention rather than the objective reality. One important phenomenon in this field is perceptual constancy. Although the sensations received about the objects are of great diversity, their perceptions are relatively stable. Size, shape, brightness and color of an object is perceived as constant. For example, a square table is always perceived as a square, no matter what the actual shape created on the retina (which changes with angle of vision and distance) is, just like a white wall is perceived as white throughout its entire length no matter what kind of a light falls on it. Despite continual changes and ambiguities in the retinal pattern, the mind persists in maintaining constant perceptions of objects.

However, there are situations when the information from different perceptual systems can be quite mismatching. Observing a pictorial representation, or a photograph to be more specific, is one of those situations.

Photographic reality: two-dimensional experience

There is one thing that has been ignored for a long time, and that is the actual reality of the photograph. Photographs have always been considered as mirrors of truth, having little, if any, identity of their own. It is true that they carry large amounts of messages which is why they are created to begin with; photographs are representations of other realities. However, it is necessary to conceive them as separate realities, too, having their own identities.

A photographic reality is a two-dimensional experience. It is a surface, mostly of a sheet of paper, which carries an image created by a series of chemical procedures, aiming to preserve the effect of light which fell on that particular surface for a fraction of time. As for the photograph of architecture on the printed page of a periodical, the same two-dimensional experience applies, the only -and easily ignorabledifference being that this time it is a mechanical reproduction of the chemically produced image.

The photographic reality is totally different from the represented reality in regards to the sensations it generates for the perceptual systems of the receiver. It has a completely dissimilar texture, to start with, than those of the surfaces it depicts. Also, the scent of a photograph is unlikely to match with the actual odors of the photographed scene. Moreover, whatever the image represents, it is impossible to hear anything other than the usual sounds of a sheet of paper while holding the photograph in hand. Touching the photograph reveals an additional conflict in that it has no actual depth, although an apparent visual depth exists in the image. Finally, the body position and movements, while looking at a photograph, are very much different than those employed while experiencing the actual scene. All these perceptions make the photograph a totally autonomous experience, independent of the image and its apparent messages.

The photograph is mainly a source of visual stimulation, and the primary factor in the phenomenon of ignoring the photograph itself and perceiving what is depicted is this fact. In spite of all the conflicting sensations from the other systems, the dominance of the visual system enables photographs to be promptly perceived as whatever they are representing. This is, as no particular exception, true for photographs of architectural space, too.

Perception of photographic space

It has been mentioned before that a photograph of architecture is an image

representing space, and the receiver is the person trying to grasp an understanding of that particular space. Hejduk describes the encounter of the receiver with the photographic image as:

"Now, perhaps the most profound confrontation of all takes place: the fixed observer looking at a... single, still photograph,.. a fixed observer seeing a fixed photograph, a most reduced confrontation. The mind of the observer is heightened to an extreme, exorcising out from a single fixed photographic image all its possible sensations and meanings -a fragment of time suspended, a recapturing of the very image that has been photographed."³¹

The visual system is responsible for this intricate job of perceiving spatial clues such as depth, distance and perspective, from a two-dimensional image. The phenomenon of binocular disparity, which makes all these perceptions in actual three dimensional environments possible, obviously does not work in this case because the two eyes see the same image. When the two retinal images are identical, it automatically follows that, having no real depth clues, the image is nothing but a surface. The marks on that surface, however, can be interpreted to be recognized as referring to objects and spaces that are not actually there. Although there are many contradictory sensations from other perceptual systems, what exactly then is the reason enabling such an interpretation?

One superficial answer to this question can be found in experiments performed by perception theoreticians. In these experiments³², it has been found out that viewers of a given photographic representation of an interior space were able to make accurate judgements of distance in the scene they were shown. However, these experiments depend on very strict laboratory conditions. The viewer is made to observe the picture and the actual scene from a stationary, monocular

34

opening which should be placed on an axis perpendicular to the picture plane, at such a distance that one sees exactly what the camera did. There is, of course, only one such point for any photograph. Also, the surface texture of the photograph is made visually negligible, achieved by carefully arranging the lighting. In other words, almost all the contradictory perceptions are avoided. Under these circumstances, being unable to fuse two separate images to provide perceived information on distance, the brain works on a single image for the same purpose.

A similar experimental situation is the case of Ames' room³³, which also demands a stable and monocular viewing point. The room, designed and built to produce irrational perceptions, succeeds this aim of being illusory only when viewed from this monocular viewpoint. [Fig. 3.1., 3.2. and 3.3.]





Fig. 3.3. Ames' Room, layout

When the room is seen with both eyes, however, the physical distortion of the room is understood and so the illusion no longer exists.

These experimental conditions are obviously artificial, especially having to view a scene, or a photograph of that scene, single eyed and without movement is not the usual procedure the visual system follows. In fact, this artificial monocular viewpoint is identical to that of a camera. The first experiment may encourage possibilities of visual perception of depth from a photographic image, but the example of Ames' room proves such possibilities unprofitable, supporting the idea that such restrictions on viewing produces unnatural perceptions. Ames' room, actually, illustrates the main problems of photography when it comes to reproducing reality faithfully. The drawbacks are due to its two dimensionality and being a fixed, stationary image.

As a result, just seeing proves insufficient to perceive the photographed space, it only enables the marks on the photographic surface to be observed. In the interpretation of these marks, however, the visual system depends on past experiences. Preconceptions and conventional expectancies effect the perceptual process more than the physical properties of an image. In the like manner, what supports the illusion of Ames' room is the tendency to perceive interiors as right angular.

Researches have proved that perception is intricately related with culture. Native African tribe members, for example, can not recognize their relatives or houses from photographs because they have no apprehension of the concept of the photograph. Once they are told what a photograph is, it still is very difficult for them to interpret the marks, in the manner a European person does for example.³⁴ The difference the Western culture prescribes is the tradition of pictorial representation employing the perspective drawing rules. The image created by the photographic lens fits accurately with the conventions of perspective drawing and that is the reason why photographic literacy is so commonplace in Western culture.

As Ulric Neisser writes:

"The nature of perception is constructive... What one sees is somehow a composite based on information accumulated over a period of time... Information from past fixations is used together with information from the present fixation to determine what is seen."³⁵

In the case of the photograph representing a particular space, the process is the same. When a photographic image is compared with the mental image, the latter is a construction, whereas the former is a mere copy. This is because, in Rudolf Arnheim's words, "vision... differs from what the photographic camera does by being active exploration rather than passive recording."³⁶

The receiver can perceive spatial clues from an image on a periodical page, therefore, depending on his or her past experiences of both architecture and photography. This means, every receiver, naturally, is going to end up with a different, and somewhat personal conception of the represented space. Apart from this divergence of interpretations, which is unavoidable, what appears to be a new variable in the subject of perceiving space from photographic images is how those images are presented to the receiver on the printed page.

٠

4

ATTITUDES TOWARDS THE USE OF PHOTOGRAPHY IN ARCHITECTURAL PERIODICALS

Roland Barthes states that "the press photograph is a message"³⁷, and he goes on to develop classifications and conclusions on this photographic message as used in newspapers. In a like manner, his deductions can justly be used for architectural periodicals, too.

Barthes describes the photographic message as being "formed by a source of emission, a channel of transmission and a point of reception"³⁸. The source of emission is the staff of the periodical, some taking the photographs while others prepare them for publication, the channel of transmission is the periodical itself, and the point of reception is the person, mostly an architect, who reads the periodical. For the periodical as a channel of transmission, Barthes has a more precise description:

"... a complex of concurrent messages with the photograph as centre and surrounds constituted by the text, the title, the caption, the layout and, in a more abstract but no less 'informative' way, by the very name of the paper [periodical]."³⁹

This is also a definition of why different periodicals apply photography in dissimilar ways. Their decisions in each successive stage of the above-mentioned preparation of the photographic message, influences the consumption of the image. Not only the text, the caption, and the layout, but even the name of the newspaper [periodical], according to Barthes, "represents a knowledge that can heavily orientate the reading of this message"⁴⁰. These decisions become acutely substantial when the dominance of visual media is regarded, and this Dondis explains as:

"There is little doubt that contemporary life style has been influenced, and crucially, by the changes enacted on it by the fact of the photograph. In print, language is the primary element, while visual factors, such as the physical setting or design format and illustration, are secondary or supportive. In the modern media, just the reverse is true. The visual dominates, the verbal augments. Print is not dead yet, nor will it ever be, but, nevertheless, our language-dominated culture has moved perceptibly toward the iconic."⁴¹

Professional periodical publications, due to their informative nature, can let neither the visual factors nor the language dominate; instead they aim to reach a balance of the two. Architectural periodicals, because of their subject matter, have always employed visual aids, and they have taken their share of the infiltration of photographic images most willingly. What follows is a brief outline of the history of photography in architectural periodicals.

Historical evolution

Periodicals devoted to the profession of architecture, with photographs included among their pages, were not published until 1870s because reliable and efficient methods that could reproduce an original photograph's subtle midtones and crisp details first appeared in these years. Before their development, photographs were unsuitable as illustrations in mass circulation books and periodicals.

The photographic print was the most frequently used means of distributing

photographic images. Each photograph was a unique print that had to be hand mounted onto the pages of a publication. As a result, photography was too expensive and laborious a form of illustration for any publication except limited edition books. What was needed was a photomechanical printing process, a technique that used a photographic negative to create a printing block, from which a mechanized press could print permanently inked images.

Two of the pioneering examples of architectural periodicals which employed such photomechanical technologies were the *Architectural Sketchbook* of 1873 and the *New York Sketchbook* of 1874⁴². Issued monthly, these publications consisted of full page illustrations of current architectural work without text. The same publisher, in 1876, started issuing the *American Architect*, a new weekly journal with articles and other written material. The *American Architect* holds an important position in the history of architectural periodicals because it was the first to demonstrate the power and influence photographic images had -and still have- on the profession of architecture. It was through this popular periodical of the period that the spreading of photographs of Richardson's buildings became possible, and consequently Richardsonian Romanesque diffused all over the continent by way of these images.⁴³

The innovation in reproduction technology was the development of halftone, a process by which the middle tones of photographs were represented by dots of ink of varying sizes on a regular grid, which yielded images printed in the same press run with the text, proving to be both economical and visually satisfactory as a means of reproducing photographs. Earlier reproductions, in contrast, were printed in separate press runs on what was likely to be a different paper from texts. [Fig. 4.1. and 4.2.]

his quarters in the abbey. James IV. was the builder of the palace, for the Scottifh monarchs feem greatly to have preferred its fheltered fituation to the exposed one of the castle. This must have been not later than 1500, for here in 1503, he received



Fig. 4.1. Albumen silver print glued to printed page (1861)

Fig. 4.2. Halftone printed page (1902)

s Wortes ist nur das Haus, das von den Bedürlnissen der Bewohner oder, nis übertragen darf, lie es bestimmt ist. its anderes als die As anderes als die nlage. Hollmann. Er hat ade die Fähigkeit, es Hauses in die versetzen, die dort eine Fähigkeit, ohne in wird. Er bedenkt (er gesagt, er em-uem und erfreulich uem und erfreulich inkenhaus. Da soll gern, den Kranken ler Hand, da sollen und bequem sein, en, die leiden, und rnder Arbeit helfen aben und behagliche man das Odiõse, unvermeidlich an-Plätze in der Sonne Oder er baut ein ie schlecht auch in iden für die Kinder das schlechteste ist. Kein Wunder, ufwand und Liebe en im schlimmsten 1 lasst die Aufgabe ien die grosse und ziale Pflicht erfüllt, ie Veranden, helle elräume: ein Haus, kel ist, kein Plätz-rstecken kann, ein Licht giebt. Aber sein, Freundlicher wirkungsvoll angemmung des Hauses, tät und macht es die in ihm arbeiten Dder er baut eine id soll nicht nur

DER BAUMEISTER * 1902 OKTOBER.

it wird, von der Fassade aus. Künst-s Wortes ist nur das Haus, das von wird bei jedem Bau eine neue, eigen. Wird nun diese Fassade einfach

gezogen, so wird s

so interessanter sy lür den einzelnen l ist. Eine interessar natürlich mit voller wollen; sie künstle anderes, als ihre g ung betonen und he ist dieser Absicht Teile, das ganze S kein Ornament, Un zweiten Punkt. Mit faulem Kr Also dieses ü das der Berliner h einem "künstlerisch lichkeit die künst Denn es zerstört

der ihr Leben aus Was schmückt i wie Ludwig Holfman Zunächst muss die ehrliche, ausdru ist schon an sich steht eben in ihrei selbst ergiebt. Ein dafür ist die Fassa in der Bärwaldst Erdgeschoss die 1 Architekt, der von ausgeht, würde sie sie hervortreten. Fenster zeigen sie dies Mezzanin gieł tümlichkeit, ein Inte gar nicht zu erreich Art zu bauen ist, Höfen der Schu keinen anderen S mus haben und de Wirkt schon die Fenster schmücker Form von Wichtigh zicht, die Art, wie

Some periodicals that started up in 1890s, such as the Architectural Record and the Baumeister, made use of the new process. The Architectural Record, as a matter of fact, was the first periodical to publish photographs of unapproved buildings, together with texts on their sides, stating why they were disfavored architecture; both features being feasible only with the new reproduction method.⁴⁴ The odd juxtaposition of images on a page in many periodicals developed in their readers a taste for such combinations, which eventually became more significant after the turn of the century.

No considerable changes occurred in reproduction techniques for a long time, however, the way the editors employed photographic images on their pages improved much. Consistency between different issues and coherence with the intentions of the periodical, for example, were achieved. A perfect example for this is the British journal, the *Architectural Review*, which in 1930s, in Robinson's words, "became a convert to the Modern Movement and adopted an appropriate style of photography"⁴⁵, occasionally employing new perspectives of worm's- and bird's-eye views in an otherwise straightforward manner of photography, which acted as a propaganda weapon. The *Review*, and other periodicals, too, actually aimed to serve a broad range of subjects including new architecture, but preferred to differentiate the images. For instance, the photographs of vernacular buildings, though innovative in subject matter, were certainly not as refined as those of the new architecture, which were predictably professional.⁴⁶

This inclination led to architectural periodicals which specialized in certain subject matters and avoided others. Today, periodicals with many different formations are on the shelves. Some deal with the design process of architecture, publishing mostly projects (e.g. Architectural Design), whereas others are interested in finished buildings, favoring photographs over drawings and illustrations (e.g. Architectural Record). Several periodicals are more specific in subject matter than others, specializing on a branch of architectural profession, like details, or lighting (e.g. Detail and Architectural Lighting). Another frequent example is the interdisciplinary journals, which bring together collaborating professions like architecture and decoration, or architecture and industrial design (e.g. Arredamento Dekorasyon and Blueprint). While most periodicals publish a few different topics in every issue, some prefer to devote each issue completely to a given subject, mostly a building type, or an architect's monograph (e.g. *El Croquis*). In such a diversity of concerns and objectives, as a matter of fact, it is not very astounding to observe that every architectural periodical has different editorial attitudes towards using photographic imagery.

Editorial attitudes

Donat compares each decision taken during the preparation of the photographic message to a *filter*, and observes:

"Architects, experiencing architecture through photographs in the magazines, have got to strip off layer upon layer of subjective 'filters' in order to get through to the architecture: the subjective eye of the photographer taking the pictures; the subjective eye of the architect selecting the most flattering ones; and the subjective eye of the art editor choosing a beautiful picture in preference to an informative one. If you understand the characteristics of the basic manipulations and controls of the medium, you will be able to peel them off in your mind's eye and get through the art and into the architecture."⁴⁷

It is with no doubt that every photograph in a periodical, surviving a process of selection, goes through some modifications in order to be ready for printing. These interventions aim at one common goal: to communicate the desired message in the desired manner. Naturally, editorial *desires* differ, displaying various editorial attitudes on the employment of photographic images. It is necessary to go through the different editorial preferences first, to understand in full depth the problems related to the use of a single image per building mentioned in the text of the periodical.

To further demonstrate these editorial preferences, a survey has been included in the scope of this study. (See Appendix.) Randomly selected issues of twelve architectural periodicals were examined in order to define their preferences. The results of this survey will be referred to whenever necessary, to exemplify some of the statements to be made in the following pages.

There are three main sources that the periodicals obtain photographs from.

44

The first is the editor cooperating with a photographer, either working free lance or one from the staff, and commissioning him assignments for each building to be photographed. The second is to demand photographs from the architect of the building. And finally, the last source is the other publications to duplicate images from, by way of photomechanical processes. This is a disadvantageous method, since it usually produces unsatisfactory reproductions, and should be generally avoided, unless of course, the particular building no longer exists.

The most favorable of these methods, surely, is the first one, the main advantage being the opportunity to contemplate the image's physical qualities in advance. However, the fact that it is the most favorable method does not necessarily make it the most exercised one, due to the detrimental nature of the financial burden of such photographic commissions. On the other hand, although demanding photographs to be supplied by the architect is a more economical way, a very restrictive situation is imposed on the editor by letting an essential decision to be taken by someone outside the periodical staff. The frequency at which an architectural periodical utilizes specific photographic assignments is reflected in a parallel manner on the impression it creates in the market. Not only such periodicals are relatively expensive, but they are also considered as being the more serious.

The relationship between the photographer and the editor depends on total collaboration in order to reveal visually coherent messages. It is necessary that the editor knows what to expect from the photographer, and it is just as important for the photographer to know how the images will in the end be used. This implies that the photographers should be made aware of the layout considerations.

Image layout: cropping and sizing

A photographer on editorial assignment rarely works the way an artist does, who is responsible for the illustrations. The artist can, in a predetermined frame, arrange his or her subject matter as he or she chooses, controlling all elements of composition. The photographer, on the contrary, has to deal with irrelevant or distracting elements often appearing within his or her frame of view. These may well be detected during photographing, but may still be impossible to eliminate. Another factor that affects what the photographer records is the size and shape of the negative, in other words the film format.⁴⁸ Its proportions do not always coincide with the image he or she has in mind. Refinement comes with corrective cropping.

It is true that, in Gerald D. Hurley's words, "cropping improves composition, achieves clarity, and heightens impact"⁴⁹, but still, some photographers and editors are strongly divided on this issue. While many a photographer disapprove the cropping of their photographs, editors claim that it is unrealistic to think that all images will appear in the exact proportions of the film format which is used⁵⁰.

Another issue is the sizing of images. Too many pages in architectural periodicals are cluttered with little pictures. Hurley comments on the causes of this practise as:

> "One theory is that editors place higher value on words than on pictures; untouchable text can mean photos of postage-stamp size. The other theory is that editors mistake the photo's function. They regard pictures as elements of design, as shapes on a page. Of less concern is what a photo says, how quickly it communicates. Overlooked is the necessity for making pictures large enough to be

Most architectural periodicals employ full page images, but the number of such pages are rarely more than a few per issue. Extreme examples on both ends of the spectrum are observable. While for instance, *El Croquis*, a Spanish publication, allows almost one fourth of its images to be printed full page, reaching a number of more than forty pages in an issue, the Turkish periodical *Mimarlık* avoids such a practice completely. (See Appendix.) A sensible generalization, however, would be to state that one out of every twelve photographs is printed on a full page.

Since the proportions of the page size of almost all architectural periodicals are very close to those of the film format, namely the 4x5 inches, which is generally applied for architectural imagery, the tendency to shoot vertical frames is explained by the possibility of being printed on the cover. A usual placement of full page photographs other than the cover is the introductory page of articles; nine of the surveyed periodicals, out of twelve, displayed such a practice. (See Appendix.)

Chromatic choices

It has been mentioned that beginning with 1970s, new technologies enabled the reproduction and printing of color images. Although the results were not fully satisfactory in the beginning, "the common view among photographers is", Fisher states, "that the magazines were pushed by advertisers to use color photography"⁵². All ad pages use color images because color, mostly, disguises weak content; people who look superficially at pages are often impressed more by colors than by content.. In the editorial pages of many periodicals, on the other hand, monochrome images are balanced with the color ones. Only three of the eleven surveyed periodicals prefer less than 10% of their printed imagery monochrome, whereas others adopt rates like 35-50%. Some smallcirculation periodicals that have arisen in late 1980s, like the American *Metropolis* and the British *Blueprint*, exhibit a return to monochrome, reaching up to more than 80% black-and-white imagery. (See Appendix.) The attractiveness of color, however, is an accepted notion since, with the exception of the *El Croquis*, all the surveyed periodicals place color images on their covers.

Interrelationship of text and image

Neither text, nor image by itself provides information more than the combination of the two. And in order to avoid ambiguity either one of the media usually dominates. The general case was that verbal information played the dominant role, images illustrating it. However, in Barthes' words, "the image no longer illustrates the words; it is now the words which, structurally, are parasitic on the image."⁵³

Architectural periodicals are invaded by photographic imagery, and this is actually necessary due to the visual nature of the profession itself. Almost all surveyed periodicals have more than one photograph for each editorial page, and in some cases this number exceeds two. (See Appendix.) The text and image rarely overlap in architectural periodicals, except for the captions on full page photographs.

Attitudes towards the use of a single photographic image per building

A frequently applied attitude in architectural periodicals is the use of a single

photographic image for a building mentioned in the related text. All the periodicals in the survey, with one exception, display such an attitude. (See Appendix.)

One interesting feature is that, although the rest of the periodical is generally visually oriented, a closer look on the pages where such photographs are seen, betrays the notion that these images are used as mere illustrations of the text. This is an employment of photographic imagery which is primarily used in the advertising pages, and thus, is totally incompatible with the rest of the editorial pages.

Placement and density within the periodical

There are basically three types of texts in an architectural periodical which such photographs accompany. The first type is the *news*, the second is the *portfolio*, and the last one is the *article*.

The *News*. The news are mostly of completion of new buildings. There is a wide spectrum of reasons for a specific building's completion to be taken as an important news, differing from one periodical to the other, but mostly it is due to the popularity of either the architect or the project itself: the latest design of a well known architect, the winning project of some competition, the new extension to an eminent old building, an avant garde project of inestimable cost, etc. Such news are generally announced especially if the project was published in a previous issue, by way of drawings and photographs of the model.

The news are mostly collected in the first few of the editorial pages, whereas, some periodicals, in a likewise manner, prefer to gather them in the last few. A

group of generally short texts, each accompanied by an image, forms the characteristic look of such a page. The image here is a 'mere illustration' because the aim is to provide a proof of what is being stated in the text⁵⁴, instead of representing the architectural experience. [Fig. 4.3. and 4.4.]



'93/251 MIMARLIK 11

Fig. 4.3. 'News' page (from Mimarlık)



Kahn's library for Phillips Exeter Academy (1972); one of the photos commissioned for the show.

Revisiting Kahn's "Reverence for Place

With great anticipation and fanfare, "Louis I. Kahn: In the Realm of Architecture," the first major retrospective exhibition of Kahn's work, opened at the Philadelphia Museum of Art in October. The excitement is justified; this is a rich and textured show that will undoubtedly do much to reawaken interest in the man and in his work.

The show features dozens of scale models of buildings and projects by Kahn, including five new, meticulously detailed models especially made for the exhibition. Complementing these are myriad trawings from all phases of Kahn's career and contemporary black-and-white photos of buildings under construction. Throughout, there is a weltome emphasis on process sketches, unbuilt schemes, and preliminary versions of projects for which Kahn is celebrated, such as the Salk Institute for Biological Studies and the Yale Center for British Art. New color photographs of completed works, shown in their own central but sequestered alcove, were commissioned by the Museum of Contemporary Art (MoCA), Los Angeles, which organized the show.

Co-curators David B. Brownlee and David G. DeLong, architectural historians from the faculty of the University of Pennsylvania, reveal aspects of Kahn's *oetture* that have been overlooked until now. The vitality of his European travel sketches from both the late 1920s and the early 1950s, and his commitment to a wide range of social housing

experiments during the Depression and war years are revelations. And his search for an appropriate design for the "Memorial to the Six Million Jewish Martyrs" (1966–1972) is a fitting coda to a lifetime of formal experimentation.

The success of the exhibit installation by Japanese architect Arata Isozaki is less obvions. Isozaki, who designed MoCA's main building in Los Angeles, based his scheme on Kahn's unbuilt project for the Mikveh Israel Synagogue in Philadelphia. Isozaki transformed curved fragments of the synagogue plan into a series of gray-stained plywood "ruins" on which drawings are hung or models supported. The effect is equivocal. The installation does little to organize or clarify Kahn's work, although the fragments do offer a dynamic, threedimensional counterpoint to the predominant flatness and small scale of the exhibited items.

Over the next three years, the exhibition, which was made possible through a major grant from the Ford Motor Company, will travel to three continents and seven different museums. At each venue, Isozaki's installation will be reconfigured to suit the space. At the Kimbell Art Museum in Fort Worth, the work will be seen in a Kahn-designed setting, without Isozaki's constructions.

The exhibition begins at a propitious moment. In the 17 years since Kahn's untimely death, his reputation has remained strong, but his influence has fluctuated. Particularly in recent years, Kahn's insistence on the need for order has not been held



The pitfalls of manufactured housing: an update on P/A's affordable housing competition winner. Practice, page 47.

Ando on Ando in a MoMA exhibition. See page 22.

Fig. 4.4. 'News' page (from Progressive Architecture)

The *Portfolio.* The portfolio is a number of buildings compiled under a common subject heading. The most typical is the architect's portfolio, which in a usual practice, includes a biography, a few criticisms of the work and a brief commentary on each building. A second case of such a compilation is the portfolio of a building type; hospitals, or resort hotels, for instance. Further examples may be buildings of a given place -e.g. temporary structures of the Expo 92 World Fair in Sevilla- or a given time period -e.g. late 19th century monumental architecture. As a result of the desire to include as many samples as possible in the few pages spared for the portfolio, each building is represented by a single image, once again acting as 'mere illustration' for the text.

It has been stated earlier that some periodicals devote each issue to a given subject, the whole issue acting as a portfolio. In such a case, since the economy factor is eliminated, each building is expressed by multiple images. However, even these periodicals, from time to time, employ a single image for a building mentioned in the text. [Fig. 4.5. and 4.6.]

The *Article.* Regardless of their specific fields of interest, all architectural periodicals use articles, the basic literary form for serial publications. The editors take the article, in Hurley's words, as an "untouchable text"⁵⁵. This is a practice which occasionally yields photographs of minute size accompanying the text. The aim of placing these images, far from representing the spatial experience, is acting as visual reminders. Just as the author uses references, the photographs are utilized as footnotes in visual terms. [Fig. 4.7. and 4.8.]

Modernist bir eğitim ve ilk dönem yapılardan sonra, Kapadokya'nın doğal ve kültürel etkileri yanı sıra "Anadolu Sanatı" kaynağı ile beslenen **Merih Karaaslan'ın** mimarlık anlayışı yaklaşık yirmi yıllık çalışmalarla, Türkiye Cumhuriyeti mimarlığı için özgün arayışlara ve sonuçlara yönelmektedir. Bu oluşumun düşünsel temelini ve gelişme sürecini yapıtlarla birlikte sunuyoruz.



Fig. 4.5. 'Portfolio' page (from Tasarım)

In 1956 Art Deco was utterly démodé, but today its esthetic credentials have been firmly re-established. So it is not surprising to see William Van Alen's Chrysler Building near the top of the list.



slipped six places in 35 years. In a burst of fancy, Kidder Smith accuses "a conspiracy of skyscrapers so fetching that they constitute the spontaneous center of New York City."

Lever House (10) is seen by Bradford Perkins of New York City as "the milestone modern office building," while Wright's S.C. Johnson and Son Administration Building (14), says Tigerman, shows "the most spiritual side of an aspiritual building type.

The only midrise building in the top tier is the Pompidou Centre by Rogers & Piano (12). This is also the only example among the top 13 buildings of high-tech architecture or of any of the other trends, like Postmodernism or Deconstructivism, that

have occupied our attention in the last few

decades. Indeed, one suspects that these trends are still too fresh to produce the works of finished art that thoughtful architects regard as "important" architecture.

But some of the avant-garde has already entered the architects' hagiography. Witness, for instance, the house Robert Venturi designed for his mother (21), about which Ron Bentley of New York City comments, "Postmodernism established on terms any true designer could love." Or witness Frank Gehry's own house in Santa Monica, California (49), where Gisue Hariri of New York City admired the introduction of "inexpensive materials with an artistic expression." Grace Anderson

(Complete list of best buildings on page 266)

(7) Seagram Bldg./Mics van der Rohe, Esto; (8) Chrysler Bldg./ William Van Alen, * Esto; (9) Rockefeller Center: Hood & Fouilhoux, * Esto; (10) Lever House/SOM. Esto; (11) Wainwright Bldg./Louis Sullican, "Esto; (12) Pompidou Centre/Piano & Rogers, -Richard Einzig; (13) S. C. Johnson & Son Bldg./Wright, ⁺Bettmann Archice; (41) Gateway Arch/Ecro Saarinen, ⁴Stan Ries; (41) Partland Public Service Bldg. Michael Graves, *Esto: (41) AT&T Bldg. Johnson-Burgee, Esto: (47) Crow Island School/Perkins & Will, "Hedrich-Blessing; (49) Athencum/Richard Meier, *Esto; (49) Gehry House/Frank Gehry, *Esto; (58) Vietnam Memorial/Maya Ying Lin, *Esto; (58) Golden Gate Bridge/J. B. Strauss, Bettmann Archive; (100) Woolworth Bldg./Cass Gilbert. Bettmann Archive.

Architectural Record July 1991 139

'Portfolio' page (from Architectural Record) Fig. 4.6.



16. 17. 'the iconic power of the body image

defies the very violence of the abstraction'; Picasso, and Le Corbusier at Chandigarh



18. Hosias Lucus archetypal forms: the , indicule and the arcade. 19. the formal significance of frontality: Michelangelo's carring technique. 20. 21. 'frontality is prime condition of nonumentality'. The Palazzo Farnese and the theatriculities of Piacentin's rettorato at Rome University.



Architecture offers a whole typology of counterforms to the 'positions' experienced in this body language. Louis Kahn once said that 'certain forms imply certain functions and certain functions call for certain forms.' It





is a reciprocity of just such a kind that binds a world of archetypal forms (aedicule, portico, column, coof) to the close world of appeite, fear and reparation that is enmeshed in the body language. Furthermore, the reciprocity embraces normative rules so that we could say, for example, that the aedicule is the very shape of a certain mode of spatial and psychological perception and that to each such level of spatial experience there is such a counterform. It is indicative of the primacy of these counterforms that they preempt all considerations of structure (the aedicule may be constructed of pisé, or wood or steel or stone) and all discriminations of style

The opposite condition—*erposure*—is experienced not only in the extreme form of agoraphobia (in which the lack of protective boundary can lead to panie)¹⁸ but also in the drama of confrontation that can take place between the facade of a monumental building and the visitor who, approaching across open space, is compelled to stand off a respectful distance and, in that intuitive act of deference, is made to feel vulnerable. Buildings vary in the degree of assertion with which they confront the visitor: this is in proportion not only to sheer size but also to the degree of frontality. Frontality of facade is a prime condition of

nonumentality and, whether it be from Colin Rowe's analysis of Michelangelo's Modello for St Lorenzo or Le Corbusier's description in *Precisions* of the mechanisms of a frontal reading, we realise that frontality is also the prime consideration for the artifice of formal rhetoric. The Palazzo Farnese or the Villa at Garches alike assert what Le Corbusier called 'the primary plane of perfect form' whose tautness is stressed by the play of advanced or recessed forms parallel to that plane. Michelangelo's awareness of the formal significance of frontality is demonstrated by his carving procedure as described by Vasari: a wax sketch model was laid in a vessel of water progressively drained so that the elements of relief always emerge in relation to the level (frontal) plane of the water; the form was developed at all times in relation to that plane.

This figural presentation of a building can take two main forms of 'Presence'. One is the form of assertion, of a confrontation whose challenge is instantaneous. It is addressed to you; and what it demands of you is a certain submission by threatening to overwhelm your self-possession. The theatricalities of Speer and of Piacentini are clear cases in point. Conversely there are buildings that do not indulge such theatre, do not demand such submission and, in Asplund's phrase, 'do not threaten but invite'; whose frontal plane is deflected away from the line of approach, whose entrance is lowscaled and welcoming: buildings whose engagement with the visitor is more subtle, extended in time from the invitation to cross the threshold and thence to await the moment of reception within, the state of envelopment. It is when these two polar positions enter into

opposition that a greater tension surfaces. Thus the most vivid of these archetypal counterforms is the *aedicule*, the miniature shelter or canopy that creates a personal domain within a major or dominant space—a space within a space. Here the simultaneity of opposite 'positions' comes into play most vividly in the resulting juxtaposition between the inside and outside over which an unresolved ambiguity reigns. For instance the aedicule will form an enclosure whose outside is still

Fig. 4.7. 'Article' page (from Architectural Review)



SOCIETE DES NATIONS BINASI, "Geleneksei" ve "Modern" görüşün politik üdeolopilerle de bes'enerek çatıştığı bir diğer yarışma ise en büyuk adıy Le Cortusier, P. Jeanneer'in, proglerımın şartamede ongörüldüy biği rayido çızımını değil mekanık kopyasını tesim etimiş olmaharı baname etilerek seçilemedilderi Societe ses Nations binası. Corbusier ve Jeanmett immarakı Tarahı açısından asıl kazananlar oldular.

SOCIETE DES NATIONS, CENEVRE «Le Corbusier, Jeanneret önerist 1927

SYDNEY OPERA BİHASI (1957-1973) J. Ubon. Sonuçların açıklarımasından hemen sonra, jöri üyelerındarın Bazırılen'in bürüm seçilen Ulton için torpat yaptığı, Ulzon'un tecrubesiz bir mimar olduğu ve sisamının çok şematik öldüğü şekilindeki deokodubar yapılı. Mickimi yapım aşamısı da Uton için hiç şarıslı qeçmer. Kabuk strükturen sorunları yubunden uzayarı yubunden 1965 yılında Uton binanını çeri kalan kısmını - Abbuk strükturden sonra yubiacakı çın eknalmarı mişasılar da örenin başkısına teslimi edecek şekilde istida ettinlir. Uton'un binasının çeri kalan kısmını - Abbuk strükturden sonra yubiaçışı en düşündüği, yende operanın da yeraabilecedi 3000 kışık salonuyla gurur düydüğü birçok metan özeliği içi bönanın inşasır gavarı düşduğu birçok metan özeliği içi bönanın inşasır gavaradı değiştiriler.





'93/251 MIMARLIK 40

Fig. 4.8. 'Article' page (from Mimarlık)

Problems related to the use of a single photographic image per building

It is impossible to see architecture in its full complexity at once. Thus, it is very hard for a single photograph to capture the essential experience of an architecture. It may, though, come very near to it, if presented properly. The above-mentioned employments of photographic images to illustrate *news*, *portfolios*, and *articles*, however, are definitely not the suitable methods.

Photographs accompanying news are usually tightly cropped frontal images of a building. Since both the editor and the architect are in a hurry to announce the occasion as early as possible, the photographer is usually sent to the site with the contractor and the construction debris still in, landscaping incomplete, and the building empty. The resulting photographs, therefore, lack some vital experiential clues.

Portfolios generally occupy a few pages, with many 'single images' on them. It is in the nature of such a compilation to generate some comparisons between the works included, and in that case, not only superficially selected images (like the kind escorting the news texts) are insufficient, but also the relationship of images of different works can be misguiding. Two photographs of varying sizes included in the same portfolio, for example, could easily lead to a misinterpretation -unconsciously most of the time- that the larger the image, the more appreciated is the building.

The size of the printed photograph is an important factor. It does not necessarily imply the architect's success, but it does relate with the legibility of the message the image carries within. The problem surfaces especially with the photographs used to illustrate articles, which are rarely printed in large sizes, in order not to distract the integrity of the text. The eye covers an architectural image, just as a visitor wanders in a building, noticing each detail, which later on adds to a general conception of the space. However, using images of minute size not only means underrating the resolution power of cameras and films, but also creates confusing visual messages, due to the perceptual problems related to minimization⁵⁶, far from possessing any experiential suggestions.

These problems, altogether, demonstrate that following the above-mentioned practices for using a single image for each building mentioned in the related text, proves to be inefficient when the architectural experience perceived from these images are questioned. The result of a superficial analysis would be to avoid such an exercise, however, the aim here is not just defining the problem which is to be dissolved by being prohibited. Besides, those images are successfully performing what they were intended to do: illustrating a certain text. The fundamental issue here is that the mentioned images are not handled properly. The same images, presented in a more appropriate way, can prove to be much more beneficial for the receiver. The following chapter outlines a proposal, which attempts to improve the existing situation.

5

FORMULATING A TYPOLOGY FOR A PHOTOGRAPHIC SERIES FOR ARCHITECTURAL PERIODICALS

The problems discussed in the previous pages clearly show that single images accompanying certain texts in an architectural periodical prove insufficient in providing the receiver with experiential clues. A way of correcting this is to develop a typology, which will form the common grounds for presenting visual messages of different spaces.

Definition of the term 'typology'

A typology is a specific kind of series. As the Oxford Dictionary defines the word as "the study and interpretation of types"⁵⁷, Marc Freidus makes a similar definition:

"A typology, simply put, is a collection of members of a common class or type... A typology is assembled by observation, collection, naming and grouping. These actions allow the members of the class to be compared, usually in search of broader patterns. These patterns may reveal biological constants if the subjects are living things, social truths if the subjects are human creations."⁵⁸

As in a series, the elements of a typology have equal weight and no fixed sequence, in a sense the units are modular. Thus, a typology is more effective when viewed as a suite of images, allowing the dialectic between the group and the specific unit of the group to become evident. For Freidus, this is the most important feature of a typological grouping:

"Once we begin to discern which characteristics are shared and which are specific, we can reap the understanding that is the goal of typology."⁵⁹

Rationale for a typological series

It has been claimed that photographs, apart from their own physical being, raise a secondary reality, which is, in Topçuoğlu's words, "more concrete than the actual world they represent."⁶⁰ Photographs are used extensively to illustrate words, giving credibility to them, and to act as reliable memory aids, due to their permanence compared with the human memory. Photographs supply representations of reality which, for reasons of convenience, soon replace it. "*Pictured* experience replaces *real* experience."⁶¹

This secondhand experience, however, has a fragile character and is easily destroyed when its contradictions with reality are observed. Especially in the case of photographs of architecture, the presumed experience, perceived from a single image, may unfavorably differ from the actual experience of the building. Formulating a typology, in which these images will be exhibited, is an attempt to clarify and reinforce the spatial experience to be deduced from them.

Another important reason for creating this typology is to avoid conflicting uses of photography in architectural periodicals. The message of the periodical is generally transmitted through visual media, of which an average of 70% are photographs. (See Appendix.) Most of the photographic images in such journals are used as the dominant elements on the page. However, the above-cited examples show that the single image practice works quite the contrary, text being dominant. This is not only contradictory to the general method of employing photographs, but also is falling short in making use of the photograph's potential. The typology, as a result, also aims to upraise the single photograph to its dominant position.

By premeditating a constant layout, and presenting each single image as a separate unit -or rather *type*- of this typology, creating comparisons will be possible. Such a method of grouping can generate a sense of continuity and flow that has a distinctive, unifying value.

Characteristics of the typology

The typological series to be formulated here, have some very distinct characteristics. It is a somewhat scientific approach to the experience of space as perceived from photographs, and it aims to provide this by way of comparison, rather than being exposed to single photographs of different subject matter presented in different graphic qualities. As in a scientific experiment, the variables are minimized, allowing the main factor to be emphasized and studied.

In general terms, there are two primary variables in a typological series of photographic images formulated for use in a periodical publication. The first variable is the image itself, and the second is the way the image is presented to the receiver. In order to minimize these variables, which together make up a unit, compositional decisions for both are premeditated, thus providing consistency between units of the typology.

The image is the most important element of this typology, being the principal means for communicating the experiential message. It has been stated before

~

61

that the actual experience of space belongs to the photographer, and is shared by the receiver. Since in the end there will be only one image, the selection and production process of that single image is highly critical. This fact deems some limitations necessary, which also serve the purpose of predetermining decisions on the content of the photograph.

The major prerequisite is that the resulting image should be as close to human vision as possible. In other words, the photographic equipment should be chosen so as to avoid results which are contradictory to human visual perception. The lens, for instance, must have an angle of vision as close to that of the eye's as the building or particular space permits. Extremely wide or narrow angles, due to their distortions in depth rendering, should be avoided. Furthermore, the camera should be positioned at a location where every pedestrian in that particular space can easily reach. Also, the correspondence between the camera and the human heights is important, too. In short, the resulting image should be close to the mental image of an ordinary visitor, actually experiencing the space.

The image should belong to a general scene of the building. The choice of subject matter defines the content of the photograph. Images of private residences, for example, have the chance to include the whole building in the angle of view due to their relatively small size. Images of civil architecture, on the other hand, are to include only partial views since the buildings are mostly very large. Of the two conventional approaches, the *perspective* should be favored -the other is the frontal *elevation*- which enables the building's form to be more easily perceived. Especially, inclusion of environmental clues is informative. Optical correction of the converging lines -perspective correction-is also a convention which should be strictly followed, since otherwise perceptually contradictory images are produced.
People in photographs are indispensable experiential clues, defining the function of the space and providing scale, which enables perceptual calibration.

The primary element on the page, naturally, is the photographic image. However, as Topçuoğlu states:

"It is difficult to give clearly defined information using only photographs, to a varied group of people. Therefore, photographs usually are employed together with other -especially verbal- media. In such a case, it is advisable that either medium should dominate the presentation of the message, in order to avoid confusion."⁶²

In the periodicals' normal order, the text generally dominates the single image, but in this case, it is a secondary medium. It is the text, this time, which illustrates the image, acting as a proof of the photograph's content by providing reference information, i.e. the name of the building, the designer, location, etc. It is important that the text be free of any commentary, which may interfere with the interpretation process of the receiver.

The image should be printed as large as possible, however, not full page. Leaving a frame space all around the image will help separate it from whatever the background is. Moreover, enough space for the supplementary representations should be supplied. What is meant by supplementary representation is a highly stylized architectural drawing of the whole building, most probably a plan of the level of the camera position, with a specially designed sign marking the location of the camera. The primary function of this is to lead the trained eye of the receiver on a quicker path of grasping the essentials of the specific architectural space.

Once the preferences for each of the elements are settled, their placement on

the page becomes permanent, acting as a grid for the layout of each unit to be included in the typology.

The units of this typology are pages of the periodical. Each page in itself, as a unit, is a self sufficient statement of the experience of a particular architecture. In order to avoid ambiguity, units should be free of any subordinate statements. The basic unit of the typology, therefore, is a single, whole page, devoted to a single building.

The unit consists of the photograph and the supplementary media which provide additional information; minimized, not to impair the univocality of the image, but necessary, to avoid ambiguity.

Explanation of the work

Two of the Bilkent University campus buildings were chosen as examples to be photographed: the building complexes which accommodate the Faculty of Business Administration and the Faculty of Fine Arts, Design and Architecture. The experience to be conveyed by photographs of these two buildings were determined as the public gathering spaces, which were used by both the students and the staff. The photographic equipment were chosen so as to avoid results which are contradictory to human visual perception. A Sinar P2 view camera was used, with normal and wide angle lenses which had angles of vision close to that of the eye's. The camera position and height were carefully arranged. Shortly, the resulting image is designed to be close to the retinal image of an ordinary visitor, actually experiencing the mentioned space. [Fig. 5.1. and 5.2.]



Fig. 5.1. Photograph (Faculty of Business Adm.)



Fig. 5.2. Photograph (Faculty of Fine Arts, Design and Arch.)

Both images avoid the frontal elevation, enabling the building's form to be easily perceived. Since both buildings are large complexes, only partial views were revealed emphasizing the most public part of the complex. Perspective correction and inclusion of people were strictly followed conventions.

A minimum amount of text with optimal information was provided for each image, including the name of the building, the designer, location and the date of completion. Any possible commentary statement was avoided. An addition was needed; however, to inform the receiver on the publication's name and date.

The image is printed as large as possible, however, not full page. The two possible layouts display different versions with both vertical and horizontal framings. [Fig. 5.3. and 5.4.]



67

As a supplementary representation a plan of the level of the camera position was provided, with a specially designed sign marking the location of the camera. The primary function of this, as it was mentioned earlier, is to lead the trained eye of the receiver on a quicker path of grasping the essentials of the specific architectural space.

The units of the typology, by definition, are modular, having equal weight and no fixed sequence. Independency of each unit is a crucial characteristic of the typology, in fact, it is what differentiates it from an ordinary grouping. In the case of pages bound in a periodical's body, however, it is very hard to talk about the units' independence. Modularity, in this case, is provided by making the pages separable from the periodical, which enables different classifications to be made by integrating different groupings. [Fig. 5.5. and 5.6.] As the number of units increase, the relations between each building and the whole will have new definitions, enabling new comparisons, which will open up new possibilities for the interpretation of each space.

To create a clear and self-sufficient spatial message, it is obligatory that the editor and photographer collaborate. Demanding the photograph from the architect, or using a previously shot photograph will not suit the process. The production of the message needs a joint mental effort. This may also be explained by Barthes' unification of the two into one body: "source of emission".⁶³

68









6 CONCLUSION

Photography appears to be an indispensable visual aid for architectural periodicals. The different approaches of periodicals in employing photographic imagery are explained together with examples. The problems related to the use of a single image for a building mentioned in the related text are clarified.

Single images accompany three types of text, namely the *news*, the *portfolio* and the *article*. The basic problem is that these images are used to support the text rather than communicate their own messages. Based on the perceptual processes discussed, it has been concluded that this way of using photography is not the way which makes best use of its potentials.

It has been mentioned before that the way photography has influenced architecture, and the way architects have come to regard it, are argued in this dissertation with one basic question in mind: how can the gap between the perception of actual space and the perception of a two dimensional image of space be narrowed down? The typology proposed for the single images is aiming to be an answer to this question.

The most obvious feature of the typology, which is proposed to improve the situation, is that it is a general and flexible pattern of limitations. It is general because it is a solution proposal for a problem which every periodical displays. And it is flexible because every architectural periodical can adopt the mentioned

characteristics to its own set of editorial preferences.

The compositional decisions are premeditated and consistent between the units of the typology. Therefore, the images within a photographic grouping are linked structurally, rather than by theme or style. Provided that these units are separable from the periodical, forming new groupings and enabling new comparisons is possible. This practise is what narrows down the abovementioned gap because each successive viewing will, with the help of the other units' messages, reveal different spatial relations. This not only clarifies the particular experience of space to be deduced from an image, but also uncovers a great deal about the experience of the photograph itself. It is accepted that the knowledge of a medium's features is the prerequisite for understanding its message clearly. As a result, it is claimed that as the total number of units published with each subsequent issue of the periodical increase, the understanding of the receiver, on photographic imagery as well as on architectural space, is going to expand.

NOTES

¹GOLDBERG, V. ed. <u>Photography In Print: Writings From 1816 To The</u> <u>Present</u>. New York: Simon And Schuster Pub., 1981, p. 20.

²GOLDBERG, V. <u>The Power Of Photography: How Photographs Changed</u> <u>Our Lives</u>. New York: Abbeville Press Pub., 1991, p. 8.

³HEIFERMAN, M. Everywhere, All The Time, For Everybody

⁴ROBINSON, C. and HERSCHMAN, J. <u>Architecture Transformed: A History</u> <u>Of Photography Of Building From 1839 To The Present</u>. Cambridge: MIT Press, 1988, p. 10.

⁵FISHER, T. "Image Building." <u>Progressive Architecture</u>. August 1990, p. 88.

⁶DONAT, J. "The Camera Always Lies: extracts and illustrations from a talk given at the RIBA on october 24, 1967." <u>RIBA Journal</u>, Feb. 1968, pp. 62.

⁷TOPÇUOĞLU, N. "Photographic Representations Of Environments And Their Use In Architectural Education: A Study In Fidelity And Univocality." Unpublished Dissertation, Middle East Technical University, 1978, p. 53.

⁸Camera obscura' is a dark room or a box with light entering through a tiny hole, in some cases focused by a lens. An inverted image from the outside world would be projected on the opposite wall, and its outlines could be traced on paper.

⁹cited in: DE MARE, E. <u>Photography And Architecture</u>. London: The Architectural Press, 1961, p. 26.

¹⁰GOLDBERG, <u>The Power Of Photography</u>. p.9.

¹¹ROBINSON and HERSCHMAN, p.4.

¹²WOODS, M. N. "The Photograph As Tastemaker: The American Architect And H. H. Richardson." <u>History Of Photography</u>. Vol. 14, Num. 2, April-June 1990, p. 155. ¹³ROBINSON classifies the historical evolution of photography of architecture into four periods, according to certain stylistic changes which occured in photography around 1880, 1930, and 1970.

¹⁴ROBINSON and HERSCHMAN, p. 110.

¹⁵Ibid., p. 180.

¹⁶Ibid., p. 10.

¹⁷Ibid., p. 112.

¹⁸FISHER, p. 88.

¹⁹Ibid., p. 94.

²⁰DE MARE, p. 25.

²¹MOLITOR, J.W. <u>Architectural Photography</u>. New York: John Wiley And Sons, 1976, p. 3.

.

²²DONAT, p. 62.

²³Ibid., p. 68.

²⁴Ibid., p. 71.

²⁵HEJDUK, J. "Introduction." <u>Judith Turner Photographs Five Architects</u>. London: Academy Editions, 1980, p. 10.

²⁶BUSCH, A. <u>The Photography Of Architecture: Twelve Views</u>. New York: Van Nostrand Reinhold Co., 1987, p. 1.

²⁷GIBSON, J. J. <u>The Senses Considered As Perceptual System</u> (1966). Westport: Greenwood Press Publishers, 1983, p. 45.

²⁸Ibid., p. 47.

²⁹WILSON, C. J. "The Natural Imagination." <u>Architectural Review</u>. Vol.185, Num.1103, January 1989, p. 65.

³⁰Ibid., p. 70.

³¹HEJDUK, p. 11.

³²See WADE, N. J. and SWANSTON, M. <u>Visual Perception</u>. London: Routledge, 1991, pp. 164-70.

³³For explanation on Ames' room, see: WADE, N. J. and SWANSTON, M. <u>Visual Perception</u>. London: Routledge, 1991, pp. 169-70, and also, SEKULER, R. and BLAKE, R. <u>Perception</u>. New York: McGraw Hill Publishing Company, 1990, pp. 225-8.

³⁴DEREGOWSKY, J. B. "Pictorial Perception And Culture." in <u>Image, Object</u> <u>And Illusion: Readings From Scientific American</u>. Comp. HELD, R. San Francisco: W. H. Freeman And Co., 1971, p. 82.

³⁵NEISSER, U. "The Processes Of Vision." in <u>Image, Object And Illusion:</u> <u>Readings From Scientific American</u>. Comp. HELD, R. San Francisco: W. H. Freeman And Co., 1971, p. 7.

³⁶ARNHEIM, R. <u>Art And Visual Perception</u>. Los Angeles: University Of California Press, 1954, p. 54.

³⁷BARTHES, R. <u>Image Music Text</u>. (1977) Trans. HEATH, S. New York: The Moonday Press, 1991, p. 15.

³⁸Ibid., p. 15.

³⁹Ibid., p. 15.

⁴⁰Ibid., p. 15.

⁴¹DONDIS, D. A. <u>A Primer Of Visual Literacy</u>. Cambridge: The MIT Press, 1973, p. 7.

⁴²WOODS, p. 158.

⁴³Ibid., p. 159.

⁴⁴ROBINSON and HERSCHMAN, p. 76.

⁴⁵Ibid., p. 118.

⁴⁶Ibid., p. 118.

⁴⁷DONAT, p. 64.

⁴⁸The three different film formats are named according to their sizes as small, medium and large respectively. The small format has a film size of 24x36 mm., and thus, a fixed proportion of 2:3. The medium format, on the other hand, has a constant film width, 6 cm., which can have many different lengths, revealing a set of proportions varying from 1:1 (i.e. 6x6 cm.) to 1:3 (i.e. 6x18 cm.). The large format has different film sizes, too, however, all are in the same proportion of 3:4 (i.e. 9x12 cm. or 18x24 cm.)

⁴⁹HURLEY, G.D. and McDOUGALL, A. <u>Visual Impact In Print</u>. Chicago: Visual Impact Inc., 1977, p. 22.

⁵⁰FISHER, p. 95.

⁵¹HURLEY and McDOUGALL, p. 25.

⁵²FISHER, p. 89.

⁵³BARTHES, p. 19.

⁵⁴Interview with Alev Erkmen, assistant editor of *Mimarlık*, May 26, 1993

⁵⁵HURLEY and McDOUGALL, p. 25.

⁵⁶See: LUMSDEN, E. A. "Problems Of Magnification And Minification: An Explanation Of The Distortions Of Distance, Slant, Shape And Velocity." in <u>The Perception Of Pictures</u>. Ed. HAGEN, M. A. New York: Academic Press, 1980, pp. 91-134.

⁵⁷The Concise Oxford Dictionary. 1976 ed.

⁵⁸FREIDUS, M. org. <u>Typologies: Nine Contemporary Photographers</u>. New York: Rizzoli, 1991, p. 10.

⁵⁹Ibid., p.10.

⁶⁰TOPÇUOĞLU, p. 69.

⁶¹FORESTA, M. A. "Introduction." <u>The Photography Of Invention: American</u> <u>Pictures Of The 1980s</u>. Cambridge: The MIT Press, 1989. p. 4.

⁶²TOPÇUOĞLU, p. 49.

⁶³BARTHES, p. 15.

APPENDIX

SURVEY OF ARCHITECTURAL PERIODICALS

The survey has been conducted with randomly selected issues of twelve architectural periodicals. Basic criteria relating the use of photographic imagery is investigated.

The surveyed periodicals, in alphabetical order, are:

Architecture Architectural Record Architectural Review Arredamento Dekorasyon Blueprint Domus El Croquis L'Architecture D'Aujourdhui Metropolis Mimarlık Progressive Architecture Tasarım

Periodicals of different countries, published in different languages are chosen. Three of the periodicals are published in Turkey.

The aim of the survey is to find out different features of architectural periodicals, and distinguish the common features from the specific ones. Since the employment of photography in advertising pages are not dictated by the editorial preferences, these pages and the images printed on them are neglected.

Table 1 displays the general results of the survey. The first column shows the ratios of editorial and advertising pages to the whole. The second column is the average number of photographic images on each page. Aside from photographs, elements of the other visual media - drawings, sketches, graphics, photographs of models, computer renderings, etc.- were also counted. The third column shows the percentage of photographic imagery in all visual media employed in the specific issue surveyed. The fourth and the fifth columns display the percentages of monochrome and full-page imagery, respectively, in the group of photographs counted. The sixth column indicates whether text is printed on images or not. And the last column, in a similar manner, shows if a photographic image is used on the cover or not.

Table 2 displays the attitudes towards the employment of a single image per building mentioned in the related text. The first column shows the number of cited examples in the sample issue. There are three kinds of texts which are accompanied by such imagery. The other columns indicate the placement of these images.

	EDITORIAL PAGES ADVERTISING PAGES	NUMBER OF PHOTOGRAPHS PER EDITORIAL PAGE	PHOTOGRAPHIC IMAGERY	MONOCHROME	FULL-PAGE IMAGERY	TEXT OVER IMAGE	PHOTOGRAPH ON COVER
ARCHITECTURE AMERICAN	%62/%38	1.4	%57	%1	%20	•	•
ARCHITECTURAL RECORD AMERICAN	%55/%45	1.2	%63	%7	%17	•	•
ARCHITECTURAL REVIEW BRITISH	%72/%28	2.1	%66	%39	%3	0	•
ARREDAMENTO DEKORASYON TURKISH	%76/%24	2.0	%93	%4	%8	•	•
BLUEPRINT BRITISH	%58/%42	1.7	%80	%84	%11	•	•
DOMUS ITALIAN	%52/%48	1.2	%63	%14	%15	•	0
EL CROQUIS SPANISH	%88/%12	0.9	%61	%78	%23	•	•
L'ARCHITECTURE D'AUJOURDHUI FRENCH	%81/%19	1.3	%69	%56	%4	0	•
METROPOLIS AMERICAN	%55/%45	1.7	%84	%83	%3	•	•
MIMARLIK TURKISH	%83/%17	0.8	%3 5	%50	%0	0	•
PROGRESSIVE ARCHITECTURE AMERICAN	%48/%52	1.4	%67	%30	%10	0	•
TASARIM TURKISH	%68/%32	1.8	%71	%42	%12	•	•

 Table 1
 Attitudes towards using photographic imagery

	Number of single images in sample issue	'News'	'Portfolio'	'Article'
	5	•	0	•
ARCHITECTURAL RECORD	8	•	•	0
ARCHITECTURAL REVIEW	13	•	0	•
ARREDAMENTO DEKORASYON	15	0	•	•
BLUEPRINT	1	•	0	0
DOMUS	0	0	0	0
EL CROQUIS	2	ο	•	0
L'ARCHITECTURE D'AUJOURDHUI	2	•	0	0
METROPOLIS	5	•	0	•
	13	0	•	•
PROGRESSIVE ARCHITECTURE	7	•	0	•
TASARIM	12	0	•	•

Table 2 Attitudes towards using single images.

~

REFERENCES

- **ARNHEIM, R.** <u>Art And Visual Perception</u>. Los Angeles: University Of California Press, 1954.
- BARTHES, R. Image Music Text. (1977) Trans. HEATH, S. New York: The Moonday Press, 1991.
- **BLOOMER, C. M.** <u>Principles Of Visual Perception</u> (1976). New York: Design Press, 1990.
- BURGIN, V., ed. Thinking Photography. London: Macmillan Pub. Ltd., 1984.
- **BUSCH, A.** <u>The Photography Of Architecture: Twelve Views</u>. New York: Van Nostrand Reinhold Co., 1987.
- **CANTER, D.** <u>Psychology For Architects</u> (1974). London: Applied Science Publishers Ltd., 1981.
- CHARLES, M. "3 Dimensions Into 2." <u>Architectural Review</u>. 1984, Vol. 175, Issue 1045, pp. 66-69.
- **DAVENPORT, A.** <u>The History Of Photography: An Overview</u>. Boston: Focal Press, 1991.
- **DE MARE, E.** <u>Photography And Architecture</u>. London: The Architectural Press, 1961.
- **DEREGOWSKY, J. B.** "Pictorial Perception And Culture." in <u>Image, Object</u> <u>And Illusion: Readings From Scientific American</u>. Comp. HELD, R. San Francisco: W. H. Freeman And Co., 1971, pp. 79-85.
- **DONAT, J.** "The Camera Always Lies: extracts and illustrations from a talk given at the RIBA on october 24, 1967." <u>RIBA Journal</u>, Feb. 1968, pp. 62-71.
- DONDIS, D. A. <u>A Primer Of Visual Literacy</u>. Cambridge: The MIT Press,

1973.

- **ERKARSLAN, O.** "Fotoğraf Sanatında Algılama Ve Görsel Dilin Kullanımı." Unpublished Dissertation. 9 Eylül University, 1990.
- FORESTA, M. A. "Introduction." <u>The Photography Of Invention: American</u> <u>Pictures Of The 1980s</u>. Cambridge: The MIT Press, 1989. pp. 3-7.
- **FREIDUS, M.** org. <u>Typologies: Nine Contemporary Photographers</u>. New York: Rizzoli, 1991.
- **GIBSON, J. J.** <u>The Senses Considered As Perceptual System</u> (1966). Westport: Greenwood Press Publishers, 1983.
- **GOLDBERG, V.**, ed. <u>Photography In Print: Writings From 1816 To The Present</u>. New York: Simon And Schuster Pub., 1981.
- **GOLDBERG, V.** <u>The Power Of Photography: How Photographs Changed Our</u> <u>Lives</u>. New York: Abbeville Press Pub., 1991.
- HARRIES, K. "Representation And Re-presentation In Architecture." <u>Via</u>. Vol. 9, 1988, pp. 13-25.
- **HEJDUK, J.** "Introduction." Judith Turner Photographs Five Architects. London: Academy Editions, 1980, pp. 9-11.
- HEIFERMAN, M. "Everywhere, All The Time, For Everybody."
- HURLEY, G.D. and McDOUGALL, A. <u>Visual Impact In Print</u>. Chicago: Visual Impact Inc., 1977.
- **KATZ, B.** and **KATZ, L. S.** <u>Magazines For Libraries</u>. New York: R. R. Bowker Company, 1982.
- **KAUFHOLD, E.** "The Mask Of Opticality." <u>Aperture</u>. Issue 123, 1991, pp. 56-69.
- McGRATH, N. <u>Photographing Buildings Inside And Out</u>. New York: Watson-Guptill Pub., 1987.
- MITCHELL, M. "Verum Factum." in <u>Thirteen Essays On Photography</u>. Montreal: Canadian Museum Of Contemporary Photography, 1990.
- MOLITOR, J.W. Architectural Photography. New York: John Wiley And Sons,

1976.

- **NEISSER, U.** "The Processes Of Vision." in <u>Image, Object And Illusion: Readings</u> <u>From Scientific American</u>. Comp. HELD, R. San Francisco: W. H. Freeman And Co., 1971, pp. 6-11.
- **POLITES, N.** "Working With Photographers." <u>Architectural Record</u>. October 1990, pp. 30-31.
- **RASMUSSEN, S. E.** <u>Experiencing Architecture</u> (1959). Cambridge: The MIT Press, 1974.
- **ROBINSON, C.** and **HERSCHMAN, J.** <u>Architecture Transformed: A History</u> <u>Of Photography Of Building From 1839 To The Present</u>. Cambridge: MIT Press, 1988.
- ROCK, I. <u>An Introduction To Percertion</u>. New York: Macmillan Publishing Co., 1975.
- ROCK, I. The Logic Of Perception. Cambridge: The MIT Press, 1983.
- **ROSENBLUM, N.** <u>A World History Of Photographers</u>. New York: Abbeville Press Pub., 1984.
- SAUNDERS, W. S. Modern Architecture: Photography By Ezra Stoller. New York: Harry N. Abrams Inc. Pub., 1990.
- **TOPÇUOGLU, N.** "Photographic Representations Of Environments And Their Use In Architectural Education: A Study In Fidelity And Univocality." Unpublished Dissertation, Middle East Technical University, 1978.
- **VESELY, D.** "Architecture And The Conflict Of Representation." <u>AA Files</u>. Num. 8-10, January 1985, pp.21-36.
- WILSON, C. J. "The Natural Imagination." <u>Architectural Review</u>. Vol.185, Num.1103, January 1989, pp.64-70.
- WOODS, M. N. "The Photograph As Tastemaker: The American Architect And H. H. Richardson." <u>History Of Photography</u>. Vol. 14, Num. 2, April-June 1990, pp.155-63.
- ZELANSKY, P. and FISHER, M. P. <u>The Art Of Seeing</u>. Englewood Cliffs: Prentice-Hall Inc., 1988.