

Architecture Photography

BY

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## Introduction

As a photographic subject, architecture has both sociological and artistic interest. In its simplest form it can reveal a considerable amount about a culture and on a grandeur level architecture can be an expression of the aesthetic. The scope for interpretation, however, is rather more limited than in most areas of photography. As with any large-scale subject, such as landscapes, the photographer has very few possibilities for making alterations.

**CHAPTER I**

**HISTORY**

## History

Photography, with its ability to produce pictures with wholly accurate proportions and precise representation of details, was ideally suited to the rendering of architecture. Architecture was, in turn, an ideal subject. Buildings, unlike most other likely subjects, "sat" patiently for the long exposures required by early emulsions. Buildings were brought within range of the photographer by the transportation revolution and it comes as no surprise that a considerable proportion of the photographs of the first two decades is of architecture.

The first phase of photography's history, from 1839 to 1851, tended to emphasize technical and artistic experimentation. A shift took place around 1851 (Robinson, C and Hershman, J: Architecture Transformed).

Hippolyte Bayard, Gustave le Gray, Henn Le Secq, Charles Nègre, and Roger Fenton were among those who developed new kinds of photographic vision that were to have considerable impact on the architectural of their own and succeeding generations. (IBID)

Around the 1860' several technological improvements occurred, especially to the light-sensitive emulsion. As with the invention of photography, some years passed before the, new technology could be fully exploited, but by the 1890's it was beginning to effect a radical change in the way people was able to see photographs of architecture. (IBID)

The modern profession of architecture began to emerge in the second quarter of the nineteenth century and with it a number of supporting institutions. (IBID)

The first public museum to house architectural drawings and projects were founded in London by Sir John Soane in 1833. The following year, the first professional organization for architects since the medieval guilds was established in London. (IBID)

In this period both the elevation and perspective were used to render buildings. The elevation was two dimensional, showing one facade of a structure. Its viewpoint was strictly frontal, and if vanishing point was centered on that facade. (IBID)

On the other hand, the perspective placed the building diagonally in space. Its diagonal orthodontias created an illusion of three-dimensionality. This illusion was usually enhanced by directional lighting, which gave depth and texture to the surfaces and separated one facade from another. (IBID)

Contextual indicators played an important role. Clouds, trees, shrubbery, vehicles, and especially people were used to set the scene. (IBID)

Buildings composed of cylindrical or polygonal forms require the perspective. It was inevitable in a view of a New York state mansion appropriately entitled font Hill Castle. (IBID)

The photographs were published as a lithograph in A.A. Turner's *Villas on the Hudson* of 1860, a pioneering American volume of photographs of country houses. The irregular plan and "picturesque" silhouette of the castle excluded a head-on view, but the photographer chose a raking light to bring out the solidity and bulk of its turrets.(IBID)

The most familiar aspect of nineteenth-century architectural photography probably is the presence of people in association with the architecture. The reason for including people in views of buildings is to establish scale.(IBID)

In the half century from 1880 to 1930 photographers at first refined a factual style that had existed since the mid-century. Starting in the 1890's photographers were led to give a more fragmentary view of their subjects. Finally, in the 1920's photographers redirected their attentions to specific subjects while still maintaining the air of self-conscious artistry learned in the pre-war years.(IBID)

The innovation in reproduction was the successful development of halftone reproduction by letterpress, a process by which the middle tones of photographs were represented by dots of ink of varying sizes on a regular grid, one whose virtues were that picture could be printed in separate press runs on what was likely to be a different paper from texts. Some magazines that started up in the nineties, such as "Architectural Record" and "Country Life", made use of the new process from their inceptions.(IBID)

The cropping of subjects and emphasis on qualities of light had also been encouraged by innovations in lens and camera design. These were the introduction of faster lenses. Notably the Zeiss Tessar, in the early years of the new century, and of cameras that could exploit them to the full. (IBID)

When Hugo Schmölz took pictures of a Catholic church (1931), he was photographing a building by a major architect whose work fell slightly outside the canons of the International Style. The picture neither emphasizes the building's elevation by handling it head on nor its experience by bringing a surface close to the camera and does not construct a metaphor by juxtaposition; rather, it treated the building the same as if it were a classicizing building. This is a trait that persists among German photographers of this period. (IBID)

The standard of the "Review's" pictures of new buildings lived up was set by photographers M.O. Dell and H.L. Wainwright, who became the magazine's official photographer in about 1930. Their style was a straight-forward, unremarkable one punctuated, by occasional word's- or bird's-eye views. A view up from Shoe Lane allowed Dell and Wainwright to emphasize the modernist glass skin of the building. The low viewpoint also allowed them to isolate their subject from any of its environment they did not want to show. (IBID)

Ezra Stoller who had started photographing in the late thirties, by the forties was using two approaches to buildings, one the head-on perspective, the other a manner of taking pictures of interiors particularly suited to those with the new, wall size sheets of glass. In a 1941 photograph of a house in Cambridge, taken at a time when the winter sun reached deep into the interior the season brought the brightness of the room into balance with the yard outside. (IBID)

The device also suggests the continuity of indoor and outdoor space, and turns the carpet into one of those textured surfaces that reach toward the camera in experiential pictures. (IBID)

Stoller acknowledged the imperative of magazine layout. When a print were ordered from him he would ask whether the purchaser wanted it cropped according to his judgment of full frame. Since both vertical and horizontal pictures were needed for a magazine layout, both types are taken even if they do not come naturally from the forms of a building. He took such a picture of Dulles Airport precisely because such pictures were often dictated more by the need to come up with a vertical format than from the inherent character of their subject. (IBID)

A photographer who often used people in his photographs was Julius Shulman, an energetic worker in Southern California. The familiar picture of Richard Neutra's Kaufmann house is a dusk shot in which the architect's wife appears beside the pool out the left. (IBID)

Hendrich shows us the relationship of the house and its terraces to each other and to the ricks and water below under strong sunlight that clearly defines each element. Underneath the terraces he shows the slabs that support them. The house is explained. (IBID)

In a head-on picture of Cesar Pallis Winter Garden at the Rainbow Center, Norman Mc Grath accepted in the colour version very errant rendering of the pavement and bollard illumination in the foreground as compared to that in the building itself. (IBID)

It is bright greenish blue, and this makes the picture a more informative statement than if the light were more accurately shown. (IBID)

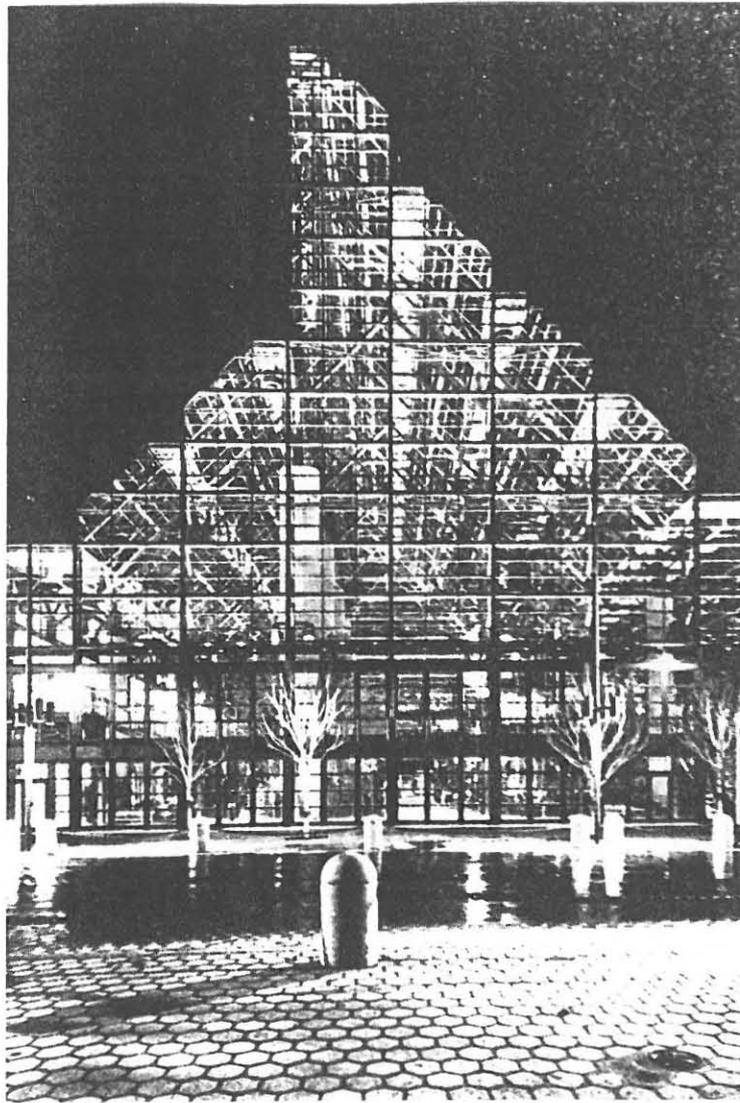


Figure 8 : Norman Mc Grath

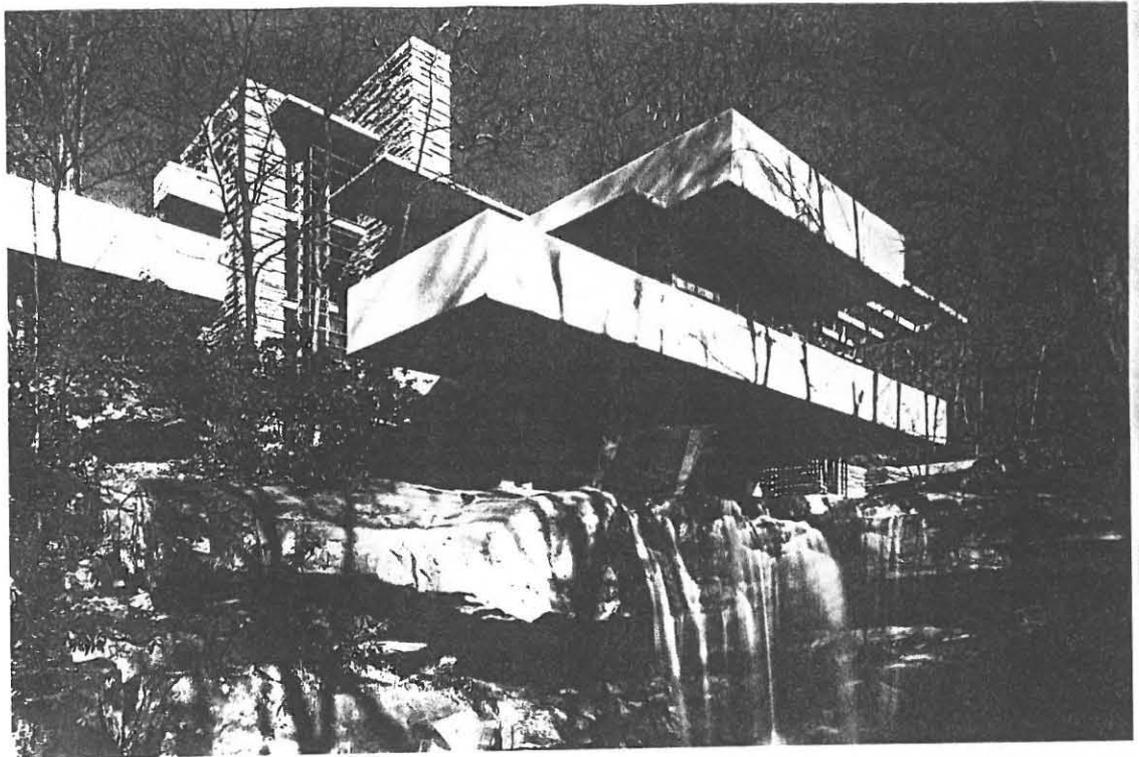


Figure 7 : Bill Hendrich

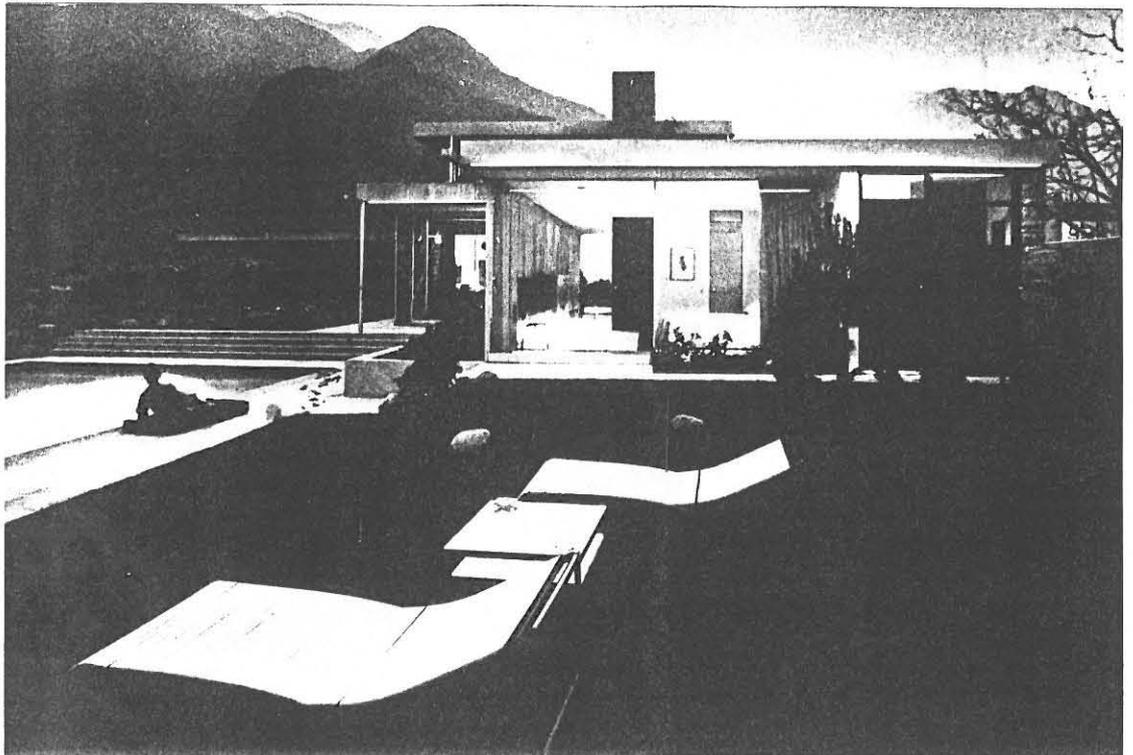


Figure 6 : Julius Shulman

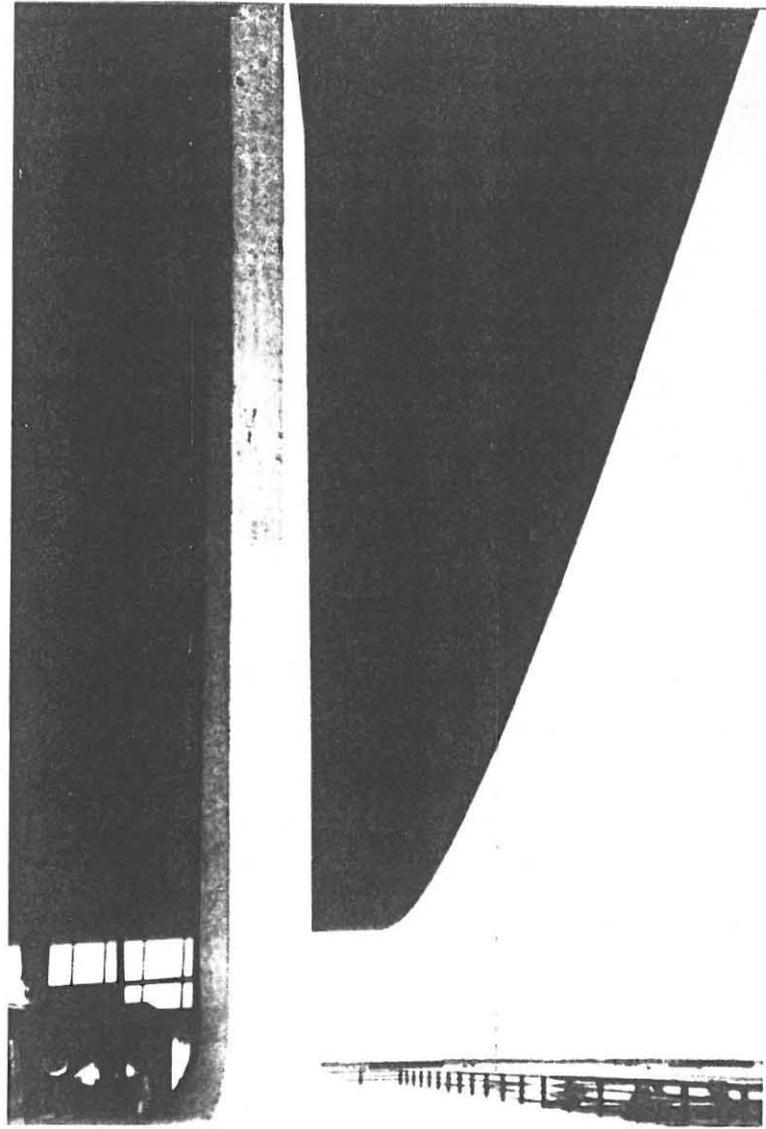


Figure 5 : Ezra Stoller

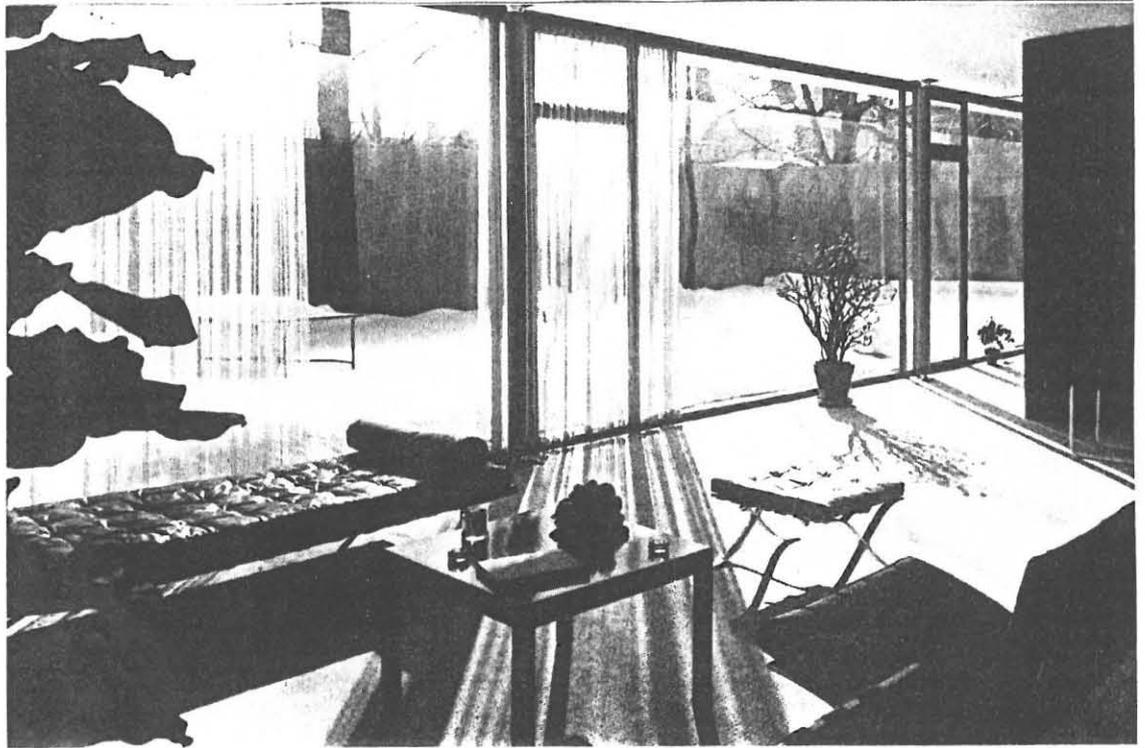


Figure 4 : Ezra Stoller

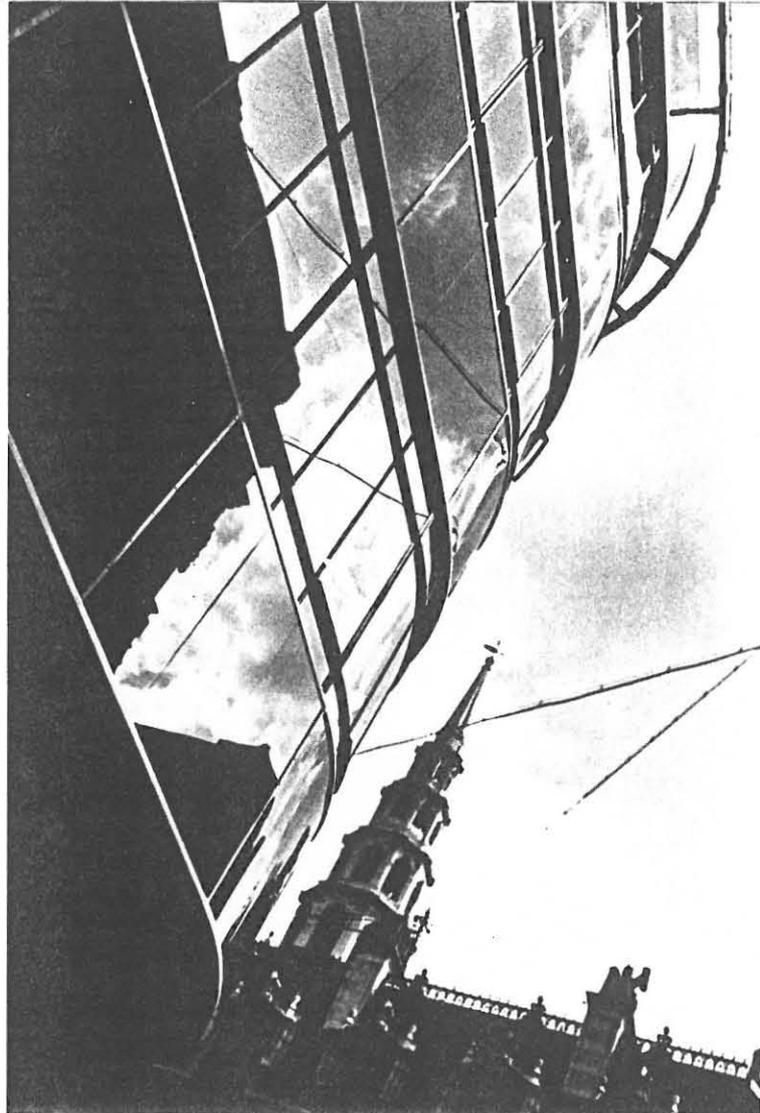


Figure 3 : Dell and Wainwright

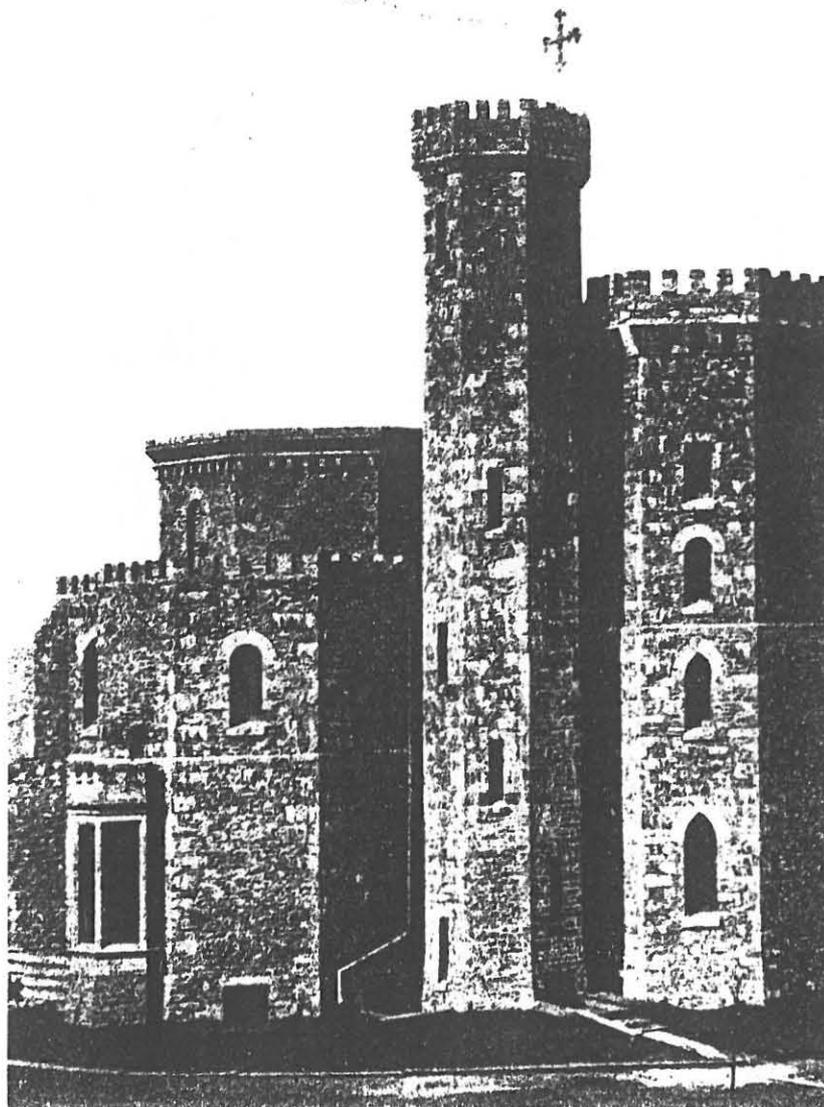


Figure 2 : Hugo Schmölz



Figure 1 : A.A. Turner

CHAPTER II

EQUIPMENT

## Equipment

### Cameras

The three basic camera's used in photography are the view camera (large format); 35 mm camera (small format); 6 X 7 (medium format). For architectural purposes all three these camera's are used but the view camera is still the architectural photographs basic tool. Consisting of a monorail supporting a front standard on which the lens is mounted and a back standard containing a groundglass for viewing.

The view camera's front and back can be moved and these movements are respectively called the rise and fall, the shift, the tilt and the swing, and they allow the photographer to adjust the size and shape of the objects in the image according to the assignment's objective.

### Lenses

Even more critical than the type of camera you use is the photographer's choice of lenses. A photographer needs the best lenses affordable.

Most frequently used lenses for the view camera is wide angle and medium long focus lenses such as the 75 mm; 90 mm and the 120 mm.

The 6 X 7 and 35 mm camera's usually used for the more detailed photographs as well as aerial photography. For the detail work long focus lenses are used because they allow the photographer to come in close to the subject. A specialized lens like the perspective control lens for a 35 mm camera enables you to correct converging verticals when taking photographs of a tall building.

## Tripods

A sturdy tripod is a must. A tripod head should rotate and tilt in any direction. A tripod's dimension when folded and it's weight are also factors to consider. Its locking mechanism should be positive and secure. The author uses a manfrotto because of it's sturdiness and good quality and it is also capable of supporting any camera from a view camera to a 35 mm camera.

## Exposure meters

Exposure determination can be quite tricky, particularly with interiors that frequently include light sources within the composition. A meter that reads a limited area of about twenty degrees or so is ideal. An exposure meter should be able to determine exposures that vary from snow scenes in bright sunlight, to dimly lit interiors with dark surfaces. For interior photography a light-meter that can take readings of ambient as well as multiple flash readings is essential.

On the other hand for exterior photography a spotmeter with a acceptance area of one degree is the best for making very accurate light readings. Both these light-meters are hand-held meters and are used with a view camera and a 6 X 7 format camera.

The 35 mm camera's are all fitted with "through the lens" light-meter systems. Many of these meters are averaging meters and are center weighted. The meter averages all the light in the scene but weights its average to give more emphasis to the area at the center of the view finder than the surrounding area. A center weighted meter can give an inaccurate reading if the subject is at the side of the frame and the surroundings are much lighter or darker than it is.

## Film selection

There are four basic categories of film: Black and white, reversal film for colour transparencies, colour negative film for colour prints, and B Polaroid. The primary objective for the films used are quality, predictability and consistency.

### Black-and-white negative film

The author uses Ilford XP one and XP two film for black-and-white photographs. This film is very fine in grain and has a excellent combination of speed, latitude and tonal range and can be processed in C 41 chemicals also used for developing colour negative film.

### Colour transparency film

Colour transparency film come in all sizes from 35 mm to 4 X 5 format. Virtually all reproduction work is done from transparencies. The author makes use of Agfa and Fuji sheet film and find that they both are fine grained. The Fuji film's colours are more bright and saturated than the Agfa film. Both these films are excellent for daylight conditions and another plus point is fuji film's ability to tolerate long exposures without reciprocity failure.

### Colour Negative film

There are two types of colour prints: the so-called "C" print that is made from a colour negative and the cibachrome print made directly from a positive transparency. The latter is very vivid in colour and excellent stability.

Type C print are somewhat less contrasty and are quieter in colour but much less expensive than a cibachrome print.

There are many negative films available for the large formats and in roll film too.

## Polaroid film

Polaroid film is used by professionals for on the job testing. It gives you a instant example of what your image will look like, if the lighting is correct, if your exposure is correct so changes can be made.

## Filters

Filters can be useful in architecture photography with black and white film, yellow and red filters darken the appearance of clear of clear skies, which will help to make a light toned building stand out prominently. With colour film a polarizing filter will have a similar effect at approximately right angles to the sun. The reflection in the glass of modern city architecture can be controlled, also with a polarizing filter.

Another type of filter is the colour correcting filter. These filters are used to match the colour temperature of the light source with that of the film, for instance when you are shooting with daylight film in tungsten light you will make use of a blue 80 A filter to correct the colour temperature.

## Light kit

A light kit or portable studio flash is a necessity to help fill in and reduce contrast and unevenness with interiors. In most cases the available light is too low or certain areas too dark and extra light is necessary. However, never overdo your extra lighting, often it is vital to preserve the existing lighting scheme as part of the character of the building itself.

CHAPTER III

EXTERIORS

## Exteriors

### Approach

The two most important controls are lighting and camera view point. First decide what the important features to show, are. Secondly plan the best time and lighting conditions to bring these important feature out best in your photograph.

### Problems

The main problems with exteriors are weather conditions, as well as irrelevant surroundings such as parked cars and building plants. Avoiding unwanted elements, is mostly matter of devising the right camera location. Architecture which is essentially low in structure with surrounding grounds usually looks more impressive from a high view-point outside the area. Advance preparation will frequently help for example, flags that might not otherwise be hoisted can be arranged for; window-washing rigs can be moved; parking can be restricted fountains can be turned on or off; offending signs can be relocated. Nothing is more annoying than being unable to accomplish the objective because of some unanticipated condition.

### Viewpoints

Most architectural photography tends to be of one distinct structure and there is a basic repertoire of skills that all architectural photographers have at their command.(Freeman, N, Encyclopedia of Practical Photography) Finding a satisfactory viewpoint is the first step and if the object is to make a straightforward frame-filling image, the alternatives should be reasonably obvious.

The more enclosed the building, the fewer possibilities there are likely to be. The viewpoint is also determined by the choice of lens. The wide-angle possibilities are the easiest to check, by walking around the building, but telephoto take much longer to investigate.

## Lighting

One complicating factor is that viewpoints can not be considered completely separate from lighting, and checking the camera positions at any one time of the day will not necessarily give a good idea of the buildings appearance at others. Other buildings, if nearby or tall, will cast shadows that shift with the hour and are not necessarily easy to predict. Anticipating the lighting according to time and the weather comes with experience, and is vital.

Certain of lighting have advantages, but this depends on the construction of the building and on its aspects. A low sun can be useful in lighting the side of a tall building evenly, and for a facade with strong relief one of the most effective lighting conditions is when the sunlight rakes it at a very sharp angle. Buildings that have large frontages of glass may look interesting by reflected light. The more diffuse light on a hazy or partly cloudy day may be better for other architecture by reducing contrast and giving a clearer image of the details

Probably the two lighting conditions that are the least useful, in most situations are very light overcast weather, which will give a high building-to-sky contrast, and a high midday sun.

## Correcting Verticals

An important technique in architectural photography is correcting "converging verticals". Any upward tilt of the camera will cause vertical lines to converge in the picture. While there is no such thing as an aesthetic rule that the sides of a building must always appear to be parallels, a formal photograph of a building appears better without perspective distortion.

Convergence is mainly a problem with close, wide-angle shots. The simplest method of overcoming this problem is to elevate the camera to about half the height of the building. The traditional method of correcting converging vertical, is to shift back the lens or the film. This can be done with a view camera or with a specially designed, perspective control lens on a small-format camera.

### Figure A

The viewpoint in this photograph plays an important role as there are other building on the left-hand side which do not compliment this building. The photograph was taken at midday, which normally is not a good time to take this kind of photograph because of the brightness of the sun. The specific day was variably cloudy and therefore made it possible to take the photograph. The clouds also play an important role in the photograph as compositional device by enhancing the photograph and giving it an overall more satisfying look. The photograph was taken with a 4 X 5 camera (Large format view camera) and a wide-angle lens. The original copy was photograph on Agfachrome 100 RS slide film and the author took the photograph on a very small aperture as to ensure that the whole building is in focus.

## Detail Architecture

Decorative and structural details of architecture are often important enough to merit special treatment. It is often possible to show more of a building's character or style by concentrating the affection upon the details of its construction or decoration rather than attempting to photograph the whole structure. By doing this it is also possible to emphasize the pictorial elements such as texture, form and pattern. It is vital that this type of photograph is recorded with maximum sharpness. Lighting is also an important consideration. A quite hard directional light best reveals the texture of wood and stone, whereas a softer, more frontal light would be more effective to photograph deeply moulded decorations or areas of extreme contrast. As a general rule, pictures of this type are best shot on medium to slow fine grained film in order to retain the finest details and to record the sharpest image.

### Figure B

This is an example of a more detailed exterior approach. The attention is focused on the details of the construction of the building. The photograph also has the pictorial element of texture and form. The photograph was taken early morning when the building had direct light to reveal the texture of the bricks. The author used a 4 X 5 camera with a long focus lens. This photography was taken on Agfachrome 100 RS slide film.

## Abstract Architecture

In contrast to the formal approach of the documentary architectural photographers, a number of modern photographers have abandoned traditional portrayal of buildings in favor of more extreme, dramatic design. This has been encouraged and even made possible by the deliberate originality of some modern architecture, using strong and unusual shapes combined with surface finishes such as all-glass. Strong camera angles, unusual viewpoints, eccentric composition and, sometimes, high contrast, are the principal techniques.

Certain designs lend themselves to an unusual approach, a visual point of view that might be less appropriate with more conventional subjects. Abstract photographs should be capable of intriguing the viewer in purely visual terms. Only of the subject itself is abstract might abstraction be considered a straightforward interpretation that will convey the design philosophy.

### Figure C

The author made use of a different viewpoint than normally in this photograph. Another aspect that makes this photograph succeed in being more abstract is the high contrast in the image. The author made use of his 35mm camera with a standard 50 mm lens. The photograph was taken at night and a long exposure was used. The author always brackets his time exposures to ensure he gets the right exposure.

## Day-night Architecture

This type of architectural photograph is a combination between a day photograph and a night photograph of the same building from exactly the same angle and viewpoint.

The technique used is to photograph a building during the late afternoon when it is still light enough to see the buildings outline against the sky and all detail of the building is visible. The camera is left on the same spot until it is dark and then a time exposure is made exposing only for the light in or around the building. The result is a single photograph of a building illuminated by daylight but with all the lights shining.

Figure D

The author chose to do a day-night photograph of this building because the coloured glass stand out better at night. The photograph was taken on Fuji slide, with a large format camera.

The only problem the author encountered was the road in front of the building and passing vehicles. The only way to avoid this was to lift the camera and cut off the road.

## Aerial Architecture

Aerial photography is technically - specific and the approach quite different from photographing at ground level. The camera is best hand held and needs to be of a manageable size.

High-quality, medium-speed film in combination with a camera equipped with a normal lens or perhaps a short-focus telephoto lens are best. An automatic camera that selects the aperture can be very helpful because it saves having to worry about correct exposures.

What conditions are best for aerial work ? Bright sun and clear atmosphere are really essential for best results. Some interesting shots can be achieved with early morning or late evening light. Back lighting or side lighting is preferable when photographing buildings from the air.

CHAPTER IV

INTERIORS

## Interior architecture

Technically, architectural interiors tend to be more difficult than outside views, principally because of lighting, but also because viewpoints tend to be restricted. The main difficulty with lighting is the unevenness and mixed colour balance of the lights. There are certain differences between the way in which interiors are perceived and how they appear in a photograph - the most important being that they are seen by means of looking around rather than at a single glance. To come close to this effect, the photograph needs to be taken with a very wide-angle lens, and then produced large enough for the viewer's eye to travel around the image. Using a wide angle, sometimes is not enough and the photographer should be prepared to shoot rooms from outside windows or from corridors looking through doorways. The normal content of a room often looks cluttered in a photograph, so time will have to be spent to remove or re-arrange items to avoid confusion and give a sense of space when seen from the camera's static viewpoint.

### Figure E

The author made use of the available tungsten lights combined with daylight film to create the overall warm feeling of the photograph. A problem was that certain areas were too dark and would have come out as black areas with no detail. To overcome this problem the author made use of a Metz 45 flash and because of the long exposure there was enough time to light the dark areas. The photograph was taken with a view camera and wide angle lens on colour negative film.

## Interior-exterior architecture

This type of interior architecture is not much different than ordinary interiors. The only difference is that the light coming from outside (natural light) and the light inside the room has to be balanced exactly the same. This results in a photograph where the interior as well as the exterior are both correctly exposed.

The easiest way to do this is by using extra lighting, in the form of flashes, to balance the interior exposure with the daylight exposure.

### Figure F

The object here was to balance the inside lighting with the outside lighting. The author made use of three broncolour flash lights to illuminate the interior. The two lights illuminating the ceiling and the sofa were also filled with yellow filters to bring out a warmer feeling in the photograph. The only problem encountered by the author were reflections in the window and the tile floor, it was corrected by moving the lights. The author made use of a 4 X 5 view camera and a wide angle lens and daylight reversal film because daylight film is balanced for natural light as well as flash light.

## Lighting

Lighting often needs special attention because, without extra lamps or flashes, the levels are too low for most films, and because the contrast is usually high. Most interiors have windows, and this gives a choice of lighting conditions, not only depending on natural light, but also between day time and night-time shooting. At one end of the scale of alternatives, daylight alone can be used, at the other, room lighting only, or any combination. In either case contrast is likely to be high: the light from one window or doorway falls off very rapidly across the room, while most room lamps tend to create pools of light with dark shadow areas in between.

The camera angle can solve some of these difficulties and a neutral graded filter can compensate for any steady fall off in light across the room.

Even with additional lighting, exposures are always needed. This is especially true if good depth of field is required since the aperture must be small.

CHAPTER V

THE AUTHOR'S PERSONAL WORK

FIGURE A :





FIGURE B :



FIGURE C :

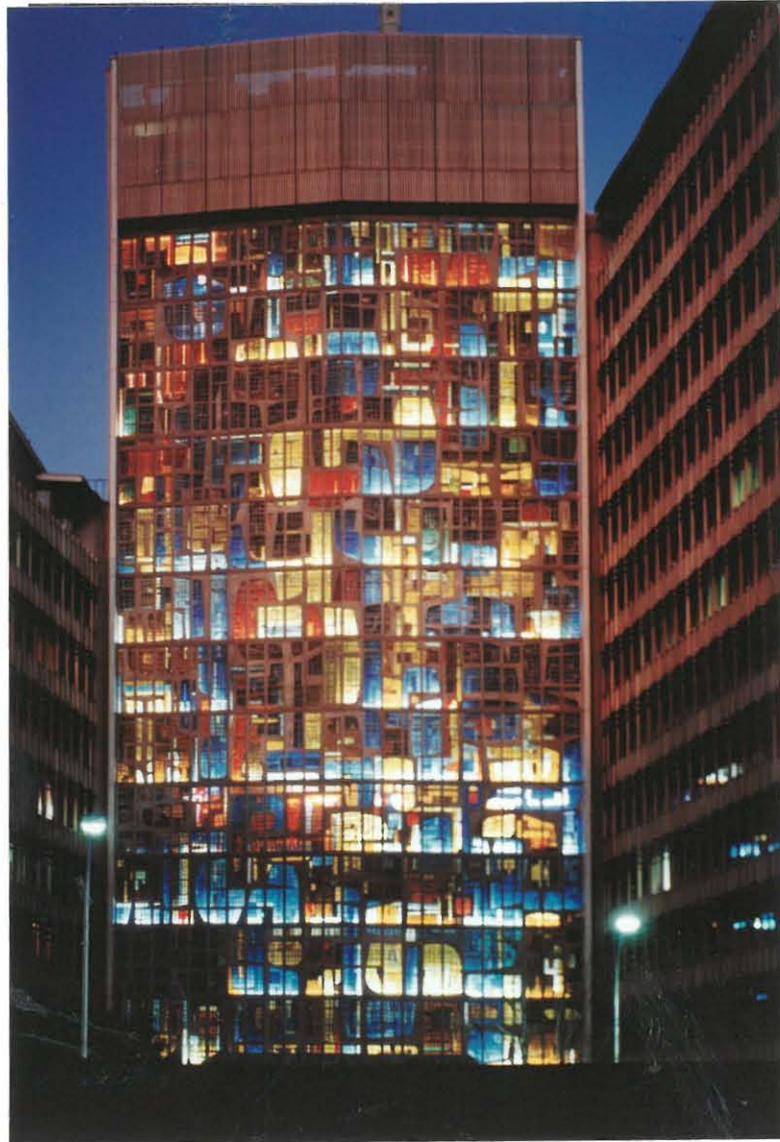


FIGURE D :



FIGURE E :



FIGURE F :



**FIGURE G :**



FIGURE H :



**FIGURE I :**



FIGURE J :



FIGURE K :



FIGURE I :



FIGURE M :



FIGURE N :

## CONCLUSION

## Conclusion

The factors that seemed fundamental a generation ago , the impact of technological development, choice of equipment and printing medium, and choice of subjects still exist, but their character has changed.

The essence of picture taking has always been selection, but we can interpret this act in different ways. Now we tend to see it as emphasizing "how" one photographs rather than "what" one photographs.

Building structures are part of our everyday lives and for as long as man will need a place to live in and work in, there always will be some form of architecture.

As long as this may be the case, the architectural photographer always will have work to do so.

## BIBLIOGRAPHY

## Bibliography

1. Bussulle; Michael - Basic Photography;  
Published in London, by  
Focalpress, 1982.
  
2. Freeman, Michael - The encyclopedia of practical  
photography; Publisher in  
London, by Quill Publishing  
Limited, 1945.
  
- 3 Langford; Michael - Advanced photography Fifth  
Edition; Published in London;  
by Focalpress, 1969.
  
4. Londen, B and Upton, J - Photography fourth Edition  
Published in the United  
States of America, Scott,  
Foresman and company, 1989.
  
5. McGrath, Norman - Photographing buildings  
inside and out, published in  
London by The Architectural  
Press, 1987.
  
6. Robinson, Cervin and  
Herchman, Joel - Architecture Transformed,  
Architectural league of New  
York, New York, 1988

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