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DEPARTMENT OF DESIGN

ROCKSCAPES:
*A Study of Forms in the
Natural Formations of Hyderabad*

A Thesis submitted to
the Department of Design
of Indian Institute of Technology, Hyderabad
in partial fulfillment of the requirements for the degree of

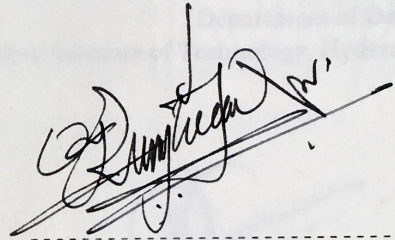
MASTER OF DESIGN

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Hyderabad, 2018

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APPROVAL SHEET

This Thesis entitled "*ROCKSCAPES: A Study of Forms in the Natural Formations of Hyderabad*" by Rajesh A. N. (MD14MDES11010) is approved for the degree of Master of Design from Indian Institute of Technology Hyderabad.



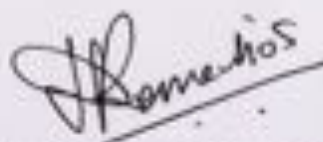
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ABSTRACT

Rock formations in the Deccan Plateau are very old; some of them are older than 2.5 million years. Geologically, rocks constitute of various mineral compositions within the core and these decide how they are shaped due to weathering over many years. These beautifully weathered landscapes are affected by the recent rapid urbanization. Thus by photographically studying the forms and divulging the inner souls, this project attempts to sensitize a viewer towards these rockscapes. Photographs are presented in square format to highlight the form and texture. As per the psychology of shapes, square is quite balanced and that encourages the viewer to move around within the frame. It provides a clutter free and simple composition. In addition, the images are printed in monochrome to eliminate the visual dominance of color, to emphasize form and texture, to feel the timelessness and to amplify the use of negative space. By grouping the images, the subject matter is presented to the viewer with intended emphasis – singles, sky, plants, shadow and radials.

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1. INTRODUCTION

Hyderabad's rocks are unique not only for their fantastic formations but also for their role in shaping its weather. But these wonderful rock formations are being jeopardized by economic development. Thus weathered, strong, peaceful souls – these gigantic rocks stand alone and bear mute testimony to the merciless and uncared destruction. To address the primary concern of protecting the rocks and to prevent the indiscriminate destruction of this natural, historical and environmental heritage, a group of artists, photographers, and environmentalists from Hyderabad have been working for the protection of the rocky landscape.

Rocks symbolize evolution. The serene beauty of the rocks and their role in human life needs to be admired. Rocks are all forms, shapes and textures and they are home to varied animals and plants. If seen through aesthetic eyes, the contentment of vision of the organic contours present a feast to the viewer.

Since the rock indulges a psychological sense of the past – history, the project starts with the study of the history of photography. Talking about Camera Obscura and Camera Lucida, the project finds the situations for the invention of photography. In 1839 photography was officially declared its inception. Since then the science world was experimenting to improve the process and the final print.

Meanwhile, threatened by the hint of rivalry against painting, art world started its course against photography and disparate it as science and could not be considered art. Pictorialists from late 1800's fought for the art status of photography, while it was an open rigor between the art-photographers and painters.

Photographers used to create painterly-images with heavy processing.

With the advent of Pure or Straight photography, the medium's won potential is explored and photography started its won path, thus not following the painterlier. Even then both the media worked closely in terms of their art definitions. Thus the Part-I of this thesis talks about various art movements like, Pictorialism, Photo-Secession, Straight Photography, Russian Contrsuctivism, California Modernism, New Objectivity, Subjective Photography, Abstract Photography, Formalism and Conceptual Art. Among these, during various time periods, forms were emphasized. Emphasis on forms are being looked upon and the masters practicing in this area. A detailed analysis of how forms are encompassed in a visual composition theoretically is studied in Part-I. Part-II talks about Hyderabad's rock formations and various heritage sites listed by the Government. Master photographers interested in photographing rocks are studied in this section as well.

Part-III deals with execution of the project - the previsualization and the shooting experience. A detailed step-by-step procedure of editing the RAW images into square format black-and-white fine prints is included as well.

This report intends to pass an experience from the very beginning, the history of photography, reviewing the relevance of forms during various art movements and the masters, studying the artistic skilled-based knowledge needed for the execution of this project.

PART - I

2. HISTORY OF PHOTOGRAPHY

“The true picture of the past flits by. The past can be seized only as an image that flashes up at the instant when it can be recognized and is never seen again”

- Walter Benjamin

Until 1952, the whole world credited the invention of photography to Louis Daguerre, when Helmut Gernsheim from Germany discovered Niépce’s Heliograph from the abandoned trunk of H. Baden Pritchard. The invention of daguerreotype was publicly announced in January 1839, which became the invention of Photography as well. In 1826 Joseph Nicéphore Niépce had succeeded in obtaining a picture on a polished pewter plate, sensitized with bitumen of Judea. He produced his first permanent bitumen image of the light drawing by dissolving the underexposed parts of the picture in oil of turpentine and rinsing the plate.

Though the concept of Camera Obscura was known to human race since ages and Mozi, a Chinese Han philosopher (380 BC) and Aristotle (320 BC) mentioned about the characteristics light rays passed through a pinhole onto a dark wall, it was an Arab physicist Ibn al-Haytham (Alhazen) wrote a detailed description of Camera Obscura in his “Book of Optics” (c. 1027). The name “*Camera Obscura*” came into use first in the 1604 book “*Ad Vitellionem Paralipomena*” by Johannes Kepler.

Since Renaissance period, the artists turned to Mathematics and Optics for assistance in solving the perspective problems, and they found that the Camera Obscura could be a mechanical aid to solve these problems. Leonardo da Vinci described the principle as:

“... light entering a minute hole in the wall of a darkened room forms on the opposite wall an inverted image of whatever lies outside...”

Ever since it was understood how light draws an image, scientists have been searching for the how-to for making a permanent image. Heinrich Schulze, a German scientist, first scientifically established the light sensitivity of silver salts in 1727. The science of Photography is the combined application of optical and chemical phenomena.

Until late 18th century, portraits were considered a possession of the high class or aristocrat families due to the expense incurred in commissioning a skilled artist. The middle-class people were looking for affordable portraits. And they wanted multiple copies too, to be shared among the family members. The artists come through a very lengthy artistic training, and they spent days to finish a portrait. Hence the thought for a mechanical device to substitute the skilled artist has sought after.

The “*Physionotrace*” (or physiognotrace), invented by Gilles Louis Chrétien in 1786, needed no expertise; which produced a miniature engraved copper plate. This copper plate can be used for producing further duplicates. The sitter’s

profile was traced on a sheet of glass with a stylus connected by levers to an engraving tool, which records in a reduced scale, its every movement on the copper plate.

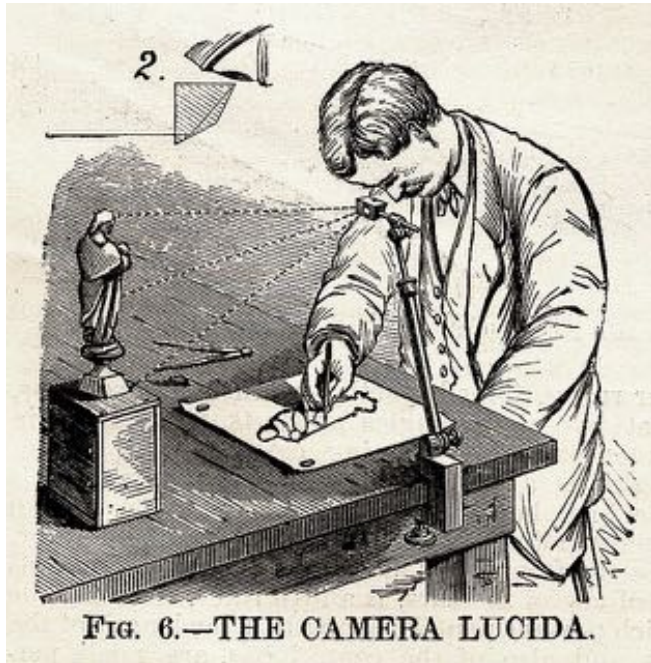


Fig 01: "Camera Lucida"

The Englishman William Hyde Wollaston invented another mechanical device the "Camera Lucida" in 1806. Camera Lucida, means "Light chamber" in Latin, is an optical instrument to facilitate accurate sketching of objects. It consists of a four-sided prism mounted on a small stand above a sheet of paper. By placing the eye closer so that half the pupil of the eye is over the prism, the observer is able to see a reflected image of an object situated in front of the prism. He can then trace the image with a pencil. Basil Hall used a Camera Lucida to document his American travels and praised the instrument,

"... that freed me from the triple misery of Perspective, Proportion and Form..."

But to many amateurs "Macadamizing" was not

enough. Even the Camera Lucida demanded a modicum of skill in drawing. The physical aid of Camera Obscura and Camera Lucida had drawn men so near to an exact copying of nature and the satisfaction of the current craving for a reality that they could not abide the intrusion of a pencil of man to close the gap. Only the pencil of nature would do.

Before the Camera Lucida was developed, Thomas Wedgwood had already attempted to make permanent prints "by the agency of light". He bathed paper in silver nitrate solution; a painting or drawing made on a glass was placed over the paper, and the whole was exposed to light. Where the glass was clear, light penetrated to the silver salts on the paper, turning them dark. But his sun prints were not permanent.

Before making his first permanent image in 1826 (Refer Fig 02), Niépce made numerous experiments and succeeded with negative images through his heliography. As he wanted a direct positive image reworking on those negative plates, ended in loss, which he made in 1817. Later, after 1826, he partnered with Louis Jacques Mande Daguerre for further research until his death in 1833. He wrote to M. Lemaître,

"...A camera as perfect as M. Daguerre's is needed, otherwise I shall be condemned to come more or less close to the goal without ever reaching it...I am, therefore, hastening to reply to his gracious offer to be of service by proposing that he cooperate with me in perfecting my heliographic process."



Fig 02: "View from the Window at Le Gras", by Joseph Nicéphore Niépce



Fig 03: "Boulevard du Temple" by Louis Daguerre in 1838

On 19 August 1839 Daguerre publicly announced his invention – Daguerreotype (Refer Fig 03). Though Daguerreotype was an instant hit and flourished well in Europe and United States, it had a few disadvantages – No duplication possible, was fragile and had to be kept under glass in a bulky case, and expensive.

In 1835, William Henry Fox Talbot, an English scientist, created the first paper negative. Later, improving his process he invented Calotype in 1840, which had a huge advantage over Daguerreotype – numerous duplicates (positive images) can be made from the negative. Even then Calotype didn't get the popularity of the Daguerreotype as Talbot held the patent and sued those who infringed. Talbot's friend Sir John Herschel coined the term "*PHOTOGRAPHY*" in 1835.



Fig 04: "Napoleon III" by Disdéri in 1859

Later came the Collodion process, invented by Frederick Scott Archer in England in 1851, which finally triumphed over Calotype and Daguerreotype. Further, Ambrotype, Tintype, Melainotype, Ferrottype entered the scene of the world of Photography. French scientist Adolphe-Eugène Disdéri invented the most popular "*Carte-de-visite*" technique in 1854 (Refer Fig 04). Until then, portraits were all the works done through photography. Few efforts were made to show the character of the sitter through lighting or posing. Nadar, (Gaspard-Félix Tournachon), among the prominent French portraitists developed a bold and vigorous style to interpret the individual who is sitting for the photograph. He took the first picture using an electric light, and in 1856, the first aerial photograph from a balloon.

2.1 ART MOVEMENTS THROUGH PHOTOGRAPHY

Photography had an identity crisis from the very beginning – Is photography Art or Science? Is photography truth or fiction? Thus photography was concerned with the relationship of "*truth*" and "*reality*" to "*beauty*". Art critics, during late 1800's, contented that the first two qualities were acceptable functions of the camera image, whereas an art expression was expected to be beautiful too. Beauty, as result of refinement, taste, spirituality, genius or intellect – qualities not found in minutely detailed super-realistic visual descriptions made by a machine.

The growing acceptance and purchase of camera

pictures by the middle-class aroused the opposition of a section of the cultural elite in England and France, calling it the “*cheapening of art*”. Nadar made a couple of cartoons, portraying how painting ousts a camera requesting for a room in the Fine Arts exhibition. But some of the prominent artists welcomed photography, and started practicing it; some even used the images as references for their painting. Eugène Delacroix says,

“... *such a wonderful invention, had arrived so late in my lifetime...*”

Between 1851 and 1862, many individual photographers joined with the prominent artistic photographers of the time like Oscar Gustave Rejlander, Henry Peach Robinson and William Lake Price in publishing articles and letter to the professional journals that attempted to analyze the aesthetic similarities and differences between graphic works and photographs to decide if photography was or was not art. It was very much needed to show its primary use as an expression medium along with a method of reproduction as widely accepted by many artists.

2.1.1 Pictorialism

As a response to the repudiation of the artistic expression of the photographic medium by contemporary artists and art critics in the early stages of photography, practitioners of the pictorialist approach sought to make their photographs look artistic through the use of “*painterly*” techniques like soft focus, staged or stylized scenes, the manipulation of negatives or

prints or composite imaging.

From the beginning there was a doubt that something so scientifically based in chemicals, experiments and physics could be self-expression in an artistic form. This perception of general public was caused by, to some extent, the statements made by the inventors of photography who are not artists themselves.

“... *spontaneous reproduction, by the action of light...*” – Joseph Niépce

“... *the Daguerreotype is not an instrument which serves to draw nature; but a chemical and physical process which gives her the power to reproduce herself...*” – Louis Daguerre

“...*impressed by nature’s hand...*” – Henry Fox Talbot

In 1888, the Eastman dry plate Company begins making the Kodak camera intended for casual use for middle-class consumers. Thus snapshot enters the history of photography. The catch line of their advertisement was unknowingly killing the intentions of the works of art-photographers at that time:

“... *you press the button; we do the rest...*”

Prior to the first movement in photography, Pictorialism, there were photographers pioneering the artistic expression through photography. Prominent names are – Gustave Le Gray, Oscar Rejlander, Henry Peach Robinson, Felix Nadar, Lady Hawarden, and Lady Filmer. In 1859, Gustave Le Gray made the first combination photograph of a beach scene. Two negatives were

combined together after exposing them separately for sky and water. Oscar Rejlander's "*Two ways of Life*" in 1857, staged a huge scene capturing them in 37 negatives and stitched all together. He explained, the difficulty, subject matter and the process makes it a work of art. Henry Peach Robinson's famous photograph "*Fading Away*", another composite image, came out in 1858. Felix Nadar introduced the aerial photography by using a balloon to shoot Paris from above calling it "*Elevating photography to Art*". In 1869, Henry Peach Robinson published the book "*Pictorial Effect in Photography*" for producing art photographs, which was originally based on John Burnet's "*Treatise on Painting*".

There is no proper definition of the term, Pictorialism, but generally it is assumed as a style in which the photographer manipulates the image that would otherwise be a straightforward photograph, in order to create an image rather than documenting or recording it. Typically, a pictorial photograph appears to lack sharp focus, have multiple colors, evidence of manipulations on the print etc. To list down the visual characteristics of a Pictorialist photograph:

- Outright rejection of point and shoot (or snapshot) approach to photography
- Labor intensive processes that showed the human hand in the process
- Emphasized photographer as craftsman
- Heavily worked negatives
- Use of textured papers

Alfred Stieglitz puts it:

"...Atmosphere is the medium through which we see all things. In order, therefore, to see them in their true value on a photograph as we do in nature, atmosphere must be there. Atmosphere softens all lines; it graduates the transition from light to shade; it is essential to the reproduction of the sense of distance. That dimness of outline, which is characteristic for distant objects, is due to atmosphere. Now what atmosphere to nature, tone is to a picture..."

To name a few of the prominent pictorialist photographers: Gertrude Kasebier, Henrich Kuhn, Clarence White, Edward Steichen, Alfred Stieglitz, Julia Margaret Cameron and Alvin Langdon Coburn.

By the turn of the century, due to large number of intercontinental travels and increased commerce, ideas and techniques of photography began to exchange. Thus Stacey McCarroll writes:

"...Pictorialism became a more international movement in photography than almost any other photographic genre..."

Robinson contended that pictorial photography was primarily symbolic or allegorical; an image could convey a message beyond its technical record of a subject. For example, evocative lighting could imply divinity, or a beautiful woman could symbolize love. Manipulation of the image to serve this metaphoric message could be a key characteristic. The combination of artistic intent and the photographer's hands-on manipulation of the image generally defined the



Fig 05: "Fading Away" by Henry Peach Robinson in 1858



Fig 06: "Experiment #27" by Clarence H. White and Alfred Stieglitz in 1907

idea underlying what came to known as pictorialism. In pictorialism, the aesthetics, emotional impact and the artistic quality of the final image take primacy over the subject matter. Pictorialism encouraged the artist to generate an emotional response in the viewer through the use of atmospheric elements and subdued tonalities to convey a mood in the image.

The hard mass was another important concept underlying pictorialism. If the photographer employed creative techniques at the time of capture, combined with manipulation of the image in the dark room, a unique artistic vision could be realized – only through the artistic intervention could the final image be achieved. Majorly applied techniques are: multiple exposures, the use of soft focus, dramatic lighting, negative manipulation, combination printing and bromoil and oil pigment printing to add artistic value to the image.

Those who still upheld the photography as a documentary medium, like Royal Photographic Society, led to various groups “seceding” from Pictorialist ideology. The first among them were “*The Linked Ring*” founded by Robinson in 1892 in England. This inspired American “*Photo-Secession*”, founded by Alfred Stieglitz in 1902 and the French “*Photo-Club de Paris*”.

Pictorialists were trying to create photographs, which looked painterlier. While painters were, too, trying to adapt some of the techniques invented by photographers, to not lose the race.

Slowly pictorialists start to split among themselves into two groups – one favoring “painter-like subject and treatment” while the second group flocks around the standards of true “photographic themes and textures”. Pictorialism started its decline by 1920, though there were serious attempts during 1940’s and 1960’s.

2.1.2 Photo-Secession

In May 1892, following a furious disagreement with the Royal Photographic Society, Henry Peach Robinson founded the Linked Ring, a group consisting of Photographers based in London, pledged to enhance photography as fine art. Royal Photographic Society was giving emphasis to the scientific process over the aesthetic matters. The Linked Ring group opened a Photographic salon exhibiting “*artistic photographs*”.

In 1902, an avant-garde group of photographers, led by Stieglitz, formed a new group – “*Photo-Secession*” opposing the orthodox approach to photography. Major visual characteristics of this movement were the employment of special printing processes, and artwork that lessened the detail on the finishing print. In November 1905, Photo-Secession started exhibitions at their studio 291 in New York and started a new journal named “*Camera Work*”.

According to Alfred Stieglitz,

“The object of the Photo-Secession is: to advance photography as applied to pictorial expression; to draw together those Americans practicing or otherwise interested in art, and to hold from time to

time, at varying paces, exhibitions not necessarily limited to the production of the Photo-Secession or to American Work.”

To name a few of the prominent figures among the Photo-Secession movement: Alfred Stieglitz, Edward Steichen, Clarence White, Gertrude Käsebier, Alvin Langdon Coburn and Frank Eugene.

The Photo-club de Paris was founded by the members who seceded from the Société de Française de Photographie. Though the group was formed in 1888, before the Linked Ring, they were not clear about their objectives and didn't share any common photographic approach. Following the ideologies of the Linked Ring, the Photo-club de Paris conducted their first exhibition in 1894.

2.1.3 Straight Photography

Art photography flourished well in England with the art photography champions Robinson and Rejlander. But Peter Henry Emerson protested, with ardor, against the stiffly posed scenes, manipulations/combinations of negatives in photography, denying any connection between science and art. He proposed a theory of art based on scientific principles. According to him, the artistic task was the imitation of the effects of nature on the eye. Being a trained physician, he was greatly impressed by Hermann von Helmholtz' *“Physiological Optics”* – which he considered the ultimate authority on the correctness of representation.

Emerson expounded his esthetic and technical

approach in a textbook *“Naturalistic Photography”* (1889). He condemned enlarging, seeing no relation between size and artistic quality; rejected retouching too. He believed that the human field of vision is not entirely sharp – central area is clearly defined while the marginal areas are more or less blurred. In 1891 Emerson wrote another book *“The Death of Naturalistic Photography”* renouncing the doctrines he advocated and concluded *“Photography – Not Art”*.

“Camera Work”, a photographic journal, was started by Alfred Stieglitz and his fellow pictorialists to promote fine art photography through pictorialism. By 1910, Pictorialism began its wane and subsequently Camera work started losing its subscriber base. In the last two issues of Camera work Stieglitz introduced the works of a young new photographer, Paul Strand, who embraced the emphasis of the beauty of clear lines and forms of ordinary objects against the soft focus and the symbolic approach - the doctrines of *“Pictorialist Photography”*.

Mike Kukulski views,

“The group espoused the uses of large depth of field, sharp focus and contact printing of large negatives on glossy paper; all to more precisely render the image of the subject. The goal was to transform the photograph from a print-maker to an image selector; the quality of the image was a result of the photographer's choice of subject form and framing, a concept that came to known as ‘previsualization’”.

Thus Straight Photography entered the scene of Art Photography in opposition to combination printing and Pictorialist manipulations. In 1917, Paul Strand refers to straight photography as “*absolute unqualified objectivity*”, while László Moholy-Nagy’s works were seen as “*pure*” photography. What we see in Straight photographs are high contrast, sharp focus, no cropping, and very strong underlying geometric structure or emphasis on the formal aspects of the photograph. The straight photographers were trying to make their works look “*photographic*” not “*painterly*” like Pictorialists.

László Moholy-Nagy, a trained painter and sculptor, came up with “*Pure Photography*”, saying photography should provide a “*new version*” which a human eye cannot perceive. Thus he brought in very unique perspectives in all his photographs.

Straight photography respects the medium’s visual language – Form, sharp focus, rich details, high contrast and rich tonalities. Straight photographers visualized the image prior to taking the photo. Edward Weston said,

“Get your lighting and exposure correct at the start and both the developing and printing can be practically automatic”

Ansel Adams did not have a different opinion either:

“... the photographer visualizes his conception of the subject as presented in the final print. He achieves the expression of his visualization through his technique – aesthetic, intellectual,

and mechanical...”

Straight photography is a process – and time – based approach. Henri Cartier-Bresson explains it as,

“... we work in unison with movement as though it were presentiment on the way in which life itself upholds. But inside movement there is one moment which the elements in motion are in balance...”

2.1.4 Russian Constructivism

Between the two World wars the art world witnessed a series of progressions as Art movements. These evolved as a drift in lifestyle due to social, political and cultural changes in the society. To name a few – Cubism, Expressionism, Futurism, Suprematism etc. Russian Constructivism involved photography and art works using photographs. It was heavily influenced by Cubism. It was art for social purposes that emerged during Russian Revolution. They wanted the viewer to be an active participant. They were heavily tied into Graphic Design; known for using strong and unique angles, abstract use of light. Alexander Rodchenko, originally a sculptor, is a prominent name in Russian Constructivism (Refer Fig 07).

According to him:

“One has to take several different shots of a subject, from different points of view and in different situations, as if one examined it in the round rather than looked through the same key-hole again and again”.



Fig 07: "Lestnitsa (steps)" by Alexander Rodchenko in 1929



Fig 08: "Succulent" by Imogen Cunningham in 1920

Constructivism is one that sought to abolish the traditional artistic concern with composition and replace it with “*construction*”. It called for a careful technical analysis of modern materials. Constructivist art aimed to demonstrate how materials behaved. The seed of constructivism was a desire to express the experience of modern life – its dynamism, its new and disorienting qualities of space and time.

2.1.5 California Modernist

In the United States, Precisionism started with Charles Sheeler and the precisionist style influenced a group of photographers to kick off the California Modernist style. Another great influence came from “*The New Vision*” approach by László Moholy-Nagy, the pure photographer.

In 1932, Edward Weston and a group of photographers formed F/64 group, promoting the Modernism aesthetic of straight photography. Other core members of the group were: Ansel Adams, Imogen Cunningham, John Paul Edwards, Sony Noskowiak, Henry Swift, and William Van Dyke. (Refer Fig 08).

F/64 group’s manifesto says,

“The group will show no work at anytime that does not conform to its standards of pure photography. Pure photography is defined as possessing no qualities of technique, composition or idea, derivative of any other art form. The production of the Pictorialist, on the other hand, indicates a devotion to principles of art which are directly related to painting and the graphic arts.”

This new style attributed highly controlled approach to technique and form. They used simple compositions with underlying shapes and geometric forms. Photographs show sharp focus, unexpected viewpoints and emphasis on form. Maximum depth of field, aesthetic beauty in the natural environment, life “*as-is*”, are some other key features of the photographs produced by the modernists, which are majorly printed on glossy paper. Edward Weston said,

“The camera should be used for a recording of life, for rendering the very substance of the thing itself, whether it be polished steel or palpitating flesh.”

The Great Depression diminished the need for a collective art purpose and slowly, the group separated afterwards.

2.1.6 New Objectivity

The artists associated with New Objectivity, taken up an impassionate realistic approach to expose the objective truth underlying contemporary ills. Realism was the key point opposing the trends towards abstraction and rejected the subjectivity approach of German Expressionists. Being committed to depict current affairs, their styles, though not common in practice, ranged from a satirical verism to a nostalgic classicism to an uncanny magical realism. Though most of the artists chose static compositions, rather than dynamic ones; rendered their subjects with great precision, and avoided any gestures. There was normally a tension in the portraits; most of the works were portraits, between the individual and

the type they play in society. Avoided any social and political commentary too.



Fig 09: “Echeoeria” by Alexander Renger Patzsch in 1922

New Objectivity photographers brought in an unprecedented documentary aesthetic to the medium. The preferred subjects were industry, technology, architecture, ordinary daily objects etc. Major characteristics of New Objectivity portraiture are – sharp angles, impartial perspectives, visual clarity and order. Macro photographs were also predominant, and they often relied on serialized repetitions and ordered arrangements of objects to portray the industrial life. Albert Renger-Patzsch, August Sander, Hein Gorny, Karl Blossfeldt were the prominent figures in the beginning.

With the rise of Nazis to power in Germany; with art critics considering this as retrograde, New

Objectivity slowed down. A new revival for new objectivity was seen in 1960’s with the Bechers practicing majorly in this style – Bernd and Hilla Becher – their typologies.

Albert Renger-Patzsch, a leading practitioner of New Objectivity photography, encapsulated his idea of new objectivity in three points in his book “*On Photography’s Significance and Photographer’s Responsibility*”.

- Since photography has its own aesthetic, it does not have to borrow one from painting, he rejects pictorial photography
- Technical skills are essential for a photographer
- The main tasks of photography are “*exact reproduction of form*”, “*inventorization*”, and “*production of documents*”.

Not a single word about being artistic, nothing about subjectivity or singular experiences. He saw the creative process of making a photograph “*only in the moment when a photograph is being conceived and taken*”. Patzsch says,

“The absolutely correct rendering of form, the subtlety of tonal gradation from the brightest light to the darkest shadow impart to a technically expert photograph the magic of experience”.

2.1.7 Subjective Photography

Subjective photography was founded in Germany in 1951, pioneered by Otto Steinert (Refer Fig 10). This evolved out of the Fotoform group and in its manifesto Steinert explains,

“... subjective photography means humanized, individualized photography...”



Fig 10: "Ein-Fuß-Gänger" by Otto Steinert in 1950



Fig 11: "Vortograph of Ezra Pound" by Alvin Langdon Coburn in 1920

There was an attempt to keep the subjective photographers away from the rise of commercial, documentary and journalistic photography. While still using the experimental techniques from the Bauhaus, their subject matter was complex, reflecting the darker aspects of the human condition through their expressionistic and hallucinatory image. Major subjective photographers were: Harry Callahan, Peter Keetman, Toni Schneiders, Aaron Siskind, Otto Steinert, and Ludwig Windstosser.

Subjective photography focuses on the importance of self-expression, opposed to the dispassionate factual depiction of objectivity. Otto Steinert wanted to “*capture from the individual object a picture compounding to its nature*”. It is meant to be self-reflective, relying more on the viewer’s interpretation and experience.

A political agenda to serve the concept of nationalism, during World War II; and subjective photographers opposed this by focusing on celebrating individualism.

“In photography you can never express yourself directly, only through optics, the physical and chemical processes. It is this sort of submission to the object and abnegation of you that is exactly what pleases me about photography. What is extraordinary is that, despite this submission and abnegation, the personality of the photographer shines through all the obstacles...”

Brassaï, quoted in “*Dialogue with Photography*” by Paul Hill and Thomas Cooper.

2.1.8 Abstract Photography

There is no single definition of Abstract photography where everyone agrees. Alvin Langdon Coburn organized an exhibition named “*Abstract Photography*” in 1916 and he states:

“... no work will be admitted in which the interest of the subject matter is greater than the appreciation of the extraordinary...”

Professor John Suler said,

“An abstract photograph draws away from that which realistic or literal. It draws away from natural appearances and recognizable subjects in the actual world. Some people even say it departs from the true meaning, existence and reality itself. It stands apart from the concrete whole, with its purpose instead depending on conceptual meaning and intrinsic forms. Here is the acid test: if you look at a photo and there’s a voice inside you that says ‘what is it’... well there you do. It is an abstract photograph...”

Walter Benjamin articulates photography’s second nature as

“... its inherent ability to detach and abstract the visible from the real. Non-representational photography lives in this contested middle ground between material reality and photographic illusion – fact and fiction.”

The word “*Abstract*”, according to Oxford English Dictionary, stands for

“relating to or denoting art that does not attempt to represent external reality, but

rather seeks to achieve its effects using shapes, colors and textures”.

Thus abstract art has a strong emphasis on form – line, shape, texture and color. Subject matter is often hidden. Forms are abstracted through exaggeration or simplification. Abstract photographers were heavily influenced by the abstract expressionists of the time. One can see the spontaneity of surrealism in abstract arts. They believed that art is non-representational and improvisational.

Paul Strand was one of the earliest abstract photographers, focusing heavily on forms and very unique perspectives.

“The photography is his (the photographer) vision of the world and expresses, however subtly, his values and conviction”.

Alvin Langdon Coburn started as a pictorialist photographer, entered the abstraction scene, with his vortographs in 1917. Vortographs (Refer Fig 11) are Kaleidoscope images made by photographing through a triangular arrangement of three mirrors. It was inspired by Vorticism, which is an offshoot of Cubism.

László Moholy-Nagy, began abstract approach to photography in 1930's condensed to its fundamentals – line, shape, texture and color. His major works involved light play. He said,

“... the organization of light and shadow effects produce a new enrichment of vision...”

Otto Steinert from Germany who founded the subjective photography movement, too heavily experimented with abstracts. His works were in response to the suppression of art by Nazi party. And they were inspired from Bauhaus aesthetic and theories.

Aaron Siskind, who travelled with abstract expressionists to work on abstract photography, popularized the style to the most:

“When I make a photograph, I want it to be an altogether new object, complete and self-contained, whose basic condition is over”

Harry Callahan, Minor White, and some others worked in abstract photography in 1950's and 1960's while the following are the famous contemporary abstract photographers: Adam Fuss, Uta Barth, Wolfgang Tillmans, and Susan Degres.

Once László Moholy-Nagy said, *“The enemy of photography is convention, the fixed rules of ‘how-to-do’. The salvation of photography comes from the experiment”*. Likewise many photographers experimented extensively in the form of abstracts. Francis Bruguière, an American photographer, who began to experiment with non-representational photography. The photographer exploits the endlessly subtle qualities of both paper and light, manipulating both in order to create complex patterns of texture and form. Jaroslav Rössler was a Czech avant-garde photographer known for combining different styles of modern photography including Cubism,

Futurism, Constructivism, New Objectivity and Abstraction. His photographs, mostly, contained just lines and shapes, exploring the contrast of light and shadows.

Vjeko Sager created photographs, much lighter in tone (or high-key). His series called “*Antimatter*” combines cut paper abstractions with charcoal drawings. Jerry Reed, influenced by both Rössler and Bruguière created “*Paper Work*” and explains the process as

“... I shaped two-dimensional art papers giving them edges and volumes, then lit them dramatically utilizing Fresnel lighting to emphasize their three dimensional forms. Though ephemeral, my forms are preserved photographically...”

Brendan Austin creates imaginary landscapes out of crumpled pieces of paper, called “*Paper Mountains*”. As he says,

“... all attempts to start a conversation concerning the loss of meaning and reality...”

The resulting images appear both recognizable as landscapes but also suggest a sense of artifice.

2.1.9 Formalism

Formalism in art is concentrated only on the analysis of its form – the way it is made and what it looks like – rather than its narrative content or its relationship to the world. In painting, therefore, a formalist would focus exclusively on the qualities of color, brushwork, form, line, and composition.

Formalism came into being in response to impressionism and post-impressionism in which unprecedented significance was placed on the purely visual aspects of the work. In 1890 the post-impressionist painter and writer on art, Maurice Denis, published a manifesto titled *Definition of Neo-Traditionism* where he emphasized that aesthetic pleasure was to be found in the painting itself, not its subject.

Plato was the first thinker to introduce the concept of form. For him, form or appearance, was that one element shared by both tangible and abstract phenomena in the world. Plato’s theories were the basis for the beginning of the aesthetic discipline – the study of beautiful. Immanuel Kant’s philosophical quests for universal truth lead him to conclude that different people, equally leading to pleasure, can judge only form of an art object equally. It was through reading of Kant that aesthetics of art, and art criticism with it, was gradually formulated by Eduard Hanslick (1891), Clive Bell (1913) and Roger Fry (1920).

In his 1914 book *Art*, Clive Bell expressed the notion of significant form – that form itself can convey feeling. This led to abstract art, an art of pure form. Formalism dominated the development of modern art until the 1960s when it reached its peak. It was precisely at that time that formalism began to be challenged by postmodernism. Clive Bell explains “*Significant form*” as:

“What quality is shared by all objects that provoke our aesthetic emotions?”

What quality is common to Sta. Sophia and the windows at Chartres, Mexican sculpture, a Persian bowl, Chinese carpets, Giotto's frescoes at Padua, and the masterpieces of Poussin, Piero della Francesca, and Cezanne? Only one answer seems possible - significant form. In each, lines and colors combined in a particular way, certain forms and relations of forms, stir our aesthetic emotions. These relations and combinations of lines and colors, these aesthetically moving forms, I call "Significant Form"; and "Significant Form" is the one quality common to all works of visual art".

Thus Formalism refers to a way of making, seeing and understanding art that focuses on the visual elements and principles of design, disregarding politics, historical context, content and the artist. In another way we may say that Formalism is opposed to Humanism - *"about photography"* rather than *"about the world."*

There was no real supporter of formalism in photography until John Szarkowski became Director of the Department of Photography at MoMA in 1962. With a vision and desire to legitimate photography as a fine art, Szarkowski generated a transliteration of Clement Greenberg's formalist aesthetics into photographic terms. He embraced the notion of medium specificity but rejected Greenberg's emphasis on the indexical essence of photography.

In "Lafayette, Louisiana (1968)", Friedlander deliberately places a conspicuous vertical object, with no inherent value, in the foreground of the

picture field, blocking our entry into the photographic space. While Baldessari's palm tree is read as a signifier of bad photography, Friedlander uses it as a formal theme. With these obstacles, Friedlander repeatedly proved his resistance to a professionalized photographic aesthetic. Lafayette, Louisiana is one of several parade images in which the photographer avoids conventional frontal views and offers instead an anti-journalistic rear view of the event. In this case, we see the backs of three uniformed figures and a lone majorette. In, what is now known as his signature style, Friedlander welcomed reflections, shadows, and obstructions that transform the people and places of New Orleans into playful pictures that are both visual puzzles, and humanistic documents. At the base of the telephone or electrical pole, we see the shadow of a head, presumably the photographer's. This inclusion of Friedlander's shadow or reflection is characteristic of many other photographs. The projection of the author into the plane of the image is another violation of journalistic practice. With the shadow, Friedlander shows that the work is intended to be self-reflexive and subjective. *"While everyone is trying to get the perfect picture, Lee Friedlander's approach seems to declare that photographs should be about how the world exists, not how we want it to be"* is a candid statement on his work.

In her discussion of the origins of postmodern art, art historian Abigail Solomon-Godeau describes the decline of photographic formalism in the

1960s and 1970s and the corresponding rise of interest in photographic works by artists who were able to approach the medium without the theoretical or institutional baggage of photographic modernism. She sees the fine art photography of the period as characterized by “*exhaustion, academicism, and repetition.*” This state resulted not only from the failure of Szarkowski-style formalism, but also from the photographers’ exploration of medium-specific, but non-formal characteristics of their medium. A number of new approaches, which often highlighted the political importance of literary texts, began to guide the field. Theorists became distrustful of the idea that a literary work could be disconnected from its origins or uses, or from the background of political and social contexts. For a number of decades following the early 1970s, the word “Formalism” took on a negative, almost judgmental connotation, representing works of literary criticism that were so absorbed in meticulous reading as to have no larger cultural relevance.

Photography produced since the 1970s has relied on discoveries made in the work of the conceptualists and the formalist photographers of the 1960s. While the former worked in opposition to Greenberg’s formalist scheme for painting, and the latter were influenced by Szarkowski’s version of photographic formalism, together they demonstrated that medium specificity for photography could include both images and ideas. Inverting Greenberg’s criticism of photography as

anecdotal, they showed that a system of reference to the outside world, indexically with all its perceptual tricks and pitfalls, was itself strength of the medium. Whether tempering photographic modernism with the look of amateurism, like Winogrand and Friedlander or making use of a banal instrumental aesthetic, like the conceptualists, 1960s practitioners opened stylistic avenues for photography while at the same time generating new subject matter within the dynamics of photographic representation.

2.1.10 Conceptual Art

Many of the art historians and art critics mark 1960’s as the beginning of conceptual art. This movement started as an opposition to the emphasis given on the skills and elaborate techniques involved in producing a work of art. Conceptual art is placed at the extreme end of the avant-garde tradition, succeeding the art movements like Cubism, Dada, Abstract Expressionism and Pop Art. In 1967, Sol LeWitt said:

“In Conceptual Art the idea or concept is the most important aspect of the work. When an artist uses a conceptual form of art, it means that all of the planning and decisions are made beforehand and the execution is a perfunctory affair. The idea becomes a machine which makes the art”.

Conceptual artists linked their work to Duchamp’s abandoning beauty, rarity and skill as measures of art. Does this mean that conceptual art is all about this idea and no relevance to the



Fig 12: "Vacant Lots 19" by Ed Ruscha in 1970

aesthetic beauty? Not really, as some art critics emphasize the need of challenging and effort some process involved in translating an idea into a tangible visual representation. John Suler says,

“In conceptual photography, we take a generalized idea based on the meaning of words and transform it into an image that is more specific and tangible. Conceptual photography turns an abstract idea into a specific visual form with substance”.

Thus concept is the essential part of the art, as they believed and reduced the material presence of the work to an absolute minimum – referred to as “*dematerialization*” of art.

During 1960’s in Germany, the philosophy of critical thinking evolved. In connection to this some of the artists argued that a work of art should make the viewer think, in spite of being a “*common object*” for viewing pleasure. They wanted the conceptual thinking operated through visualization. Conceptual photography has been worked out in different ways. First, based on the unique methodology of conceiving an idea and planning the execution and the final result. Most often the artist or photographer knows what he wants and stages the situation or manipulates the image once it is captured. Another group of artists used photographs and texts in their conceptual work of art. A third approach to conceptual photography evolved during 1970’s when artists started documenting performances, typological, or serial imageries, or the restaging of events with social relevance.

While visually representing a concept certain photographers thrive to make it a specific or unique idea – i.e. irrespective of the viewers’ cultural or social background, the intended message should be conceived same. On the other hand, certain artists use the concept as pointers to make the viewers think about a certain depiction and interpret according to each viewer.

Prominent names in the Conceptual photography are: (1960’s) Ed Ruscha (Refer Fig 12), Bernd and Hilla Becher, (1970’s) Victor Burgin, Douglas Huebler, Keith Arnatt, John Hilliard, (1980’s) Cindy Sherman, Sherrie Levine, Richard Prince (1990’s) Jeff Wall, Thomas Ruff, Thomas Struth, Thomas Demand, Gregory Crewdson, and Andreas Gursky.

2.2 EMPHASIS ON FORMS IN HISTORY

With the advent of straight photography through Precisionism and Modernism, photography sees an apparent emphasis on form. Looking at the straight photography, high contrast, sharp focus, avoidance of any cropping, underlying geometric structure and emphasis on the formal aspect are the major visual characteristics. The photographers tried to depict the world around them as it is seen. Deadpan approach and objective reality added to the uniqueness of straight photography.

On the other hand, Precisionism, with the doctrine, “*absolute unqualified objectivity*”

emphasized material qualities of the real world. Straight photographers heavily influence them. They often used highly controlled approach to the technique and form. Sharp focus, unexpected viewpoints, emphasis on form, maximum depth of field, evident aesthetic beauty, glossy paper printing, are other major visual characteristics.

Modernism follows precisionism with these visual characteristics – high contrast, broad tonal range, sharp images, and strong geometric forms. Modernists too rejected the artistic manipulations like soft focus and painterly quality of pictorialism and praised the straightforward unadulterated images of modern life, further expanding the artistic capabilities and techniques of photography.

Abstract photography is all about forms. Notable visual characteristics are: Subject matter often not clear or hidden, forms abstracted through exaggeration or simplification, use of close-ups, silhouettes, motion, blur, distortions and strong emphasis on form and color. Through the works of László Moholy-Nagy and Man Ray, abstract photography gained appreciation and recognition as a realm for experimentation.

2.1.1 The psychology of abstract forms

As discussed in the previous sections, we saw that the socio-political changes in the society pushed the world of art to take up various styles and movements. Now it is checked why abstraction is adopted and what makes it acceptable. The

incongruous entry of photography created confusion in the art world and the photographers strived to get a “*painterly*” status for photography in the art market. Some photographers opposed this approach and emphasized the capabilities of photography which only photography can offer – representational depictive nature, reality as truth. This opened up the stage for straight and pure photography.

As photography grows up from a teenager, technology developed and photographers could create contrastier, high quality tonality, reduced size of cameras etc. As photography started walking on its feet the “*art-photographers*” realized the need for addressing the social issues and started working more closely with real life.

By the middle of the twentieth century artists started to think about making the viewer think too, rather than a spectator experiencing the visual pleasure of aesthetical beauty. This paved the way for Modernism, and Conceptual art. During the same time some of the artists experimented with a quite unique way of making the viewer think: without telling him much or nothing at all. The artist extended to give the viewer the immense pleasure in decoding the message. At times the work of art could provide the viewer a virtual journey through his own experiences.

The psychological aspect of abstract work of art especially photography, will be looked upon. Scientific studies support that “*abstraction*” can stimulate very active neural activity, as the

spectator struggles to identify the work – striving to find the similar shapes. The work will be seen as a puzzle, the brain is pleased when it succeeds to “solve” the problem.

Angelina Hawley-Dolan of Boston College concluded from a study that people preferred the abstract work by professional artists over those by amateur, children or animals and thus the artist could convey his vision over to the viewer. This emphasizes the careful composition by a professional artist involving hints to familiar shapes. Hawley-Dolan says,

“... the blurry images of impressionist art stimulates the brain’s amygdala, which plays a central role in feelings and emotions...”

Kate Austen hypothesises that,

“...works of abstract art which contains no recognizable object for the brain may have an effect through well-balanced compositions as they appeal to the brain’s visual system...”

2.1.2 People – Abstract Photography

In the following sections the famous abstract photographers of twentieth century will be reviewed.

2.1.2.1 László Moholy-Nagy

Moholy-Nagy was one of the twentieth century’s most influential creative intellect and theoretician. By 1922 he was making photograms and

photomontage. “*Light*” was the magic catalyst in art he preached. Being an experimenter in various fields like painting, sculpting, printmaking, industrial design, typography and photography, he began the abstract approach to photography in 1930, condensing down to the fundamental elements – line, shape, texture, color and form. The intellectual visionary and academician once said,

“The illiterate of the future will be the person ignorant of the use of the camera as well as the pen”.

To experiment the subtlety of light and shadow, he created photograms, by laying everyday objects on light-sensitive paper before exposing them (Refer Fig 13). He controlled the brightness by adjusting the exposure time. He created long exposure light painting using multiple colored lights. The forms he composed extend from organic curves to thick translucent object impressions.

2.1.2.2 Paul Strand

An American photographer, followed Modernist tradition, is often identified as the pioneer of straight photography, a pure photographic style that utilized large format cameras to record and bring new perspectives to ordinary or previously ignored subjects. He took up photography as his area of interest, after seeing an exhibition at the Studio 291, and later influenced even Stieglitz to follow straight photography. He used large format cameras to create high contrasts, flat images, semi abstractions and geometric repetitions.



Fig 13: "Three Shots of Traffic Lights" by László Moholy-Nagy 1939-46



*Fig 14: "Abstraction, Twin Lakes, Connecticut" by Paul Strand
1916*

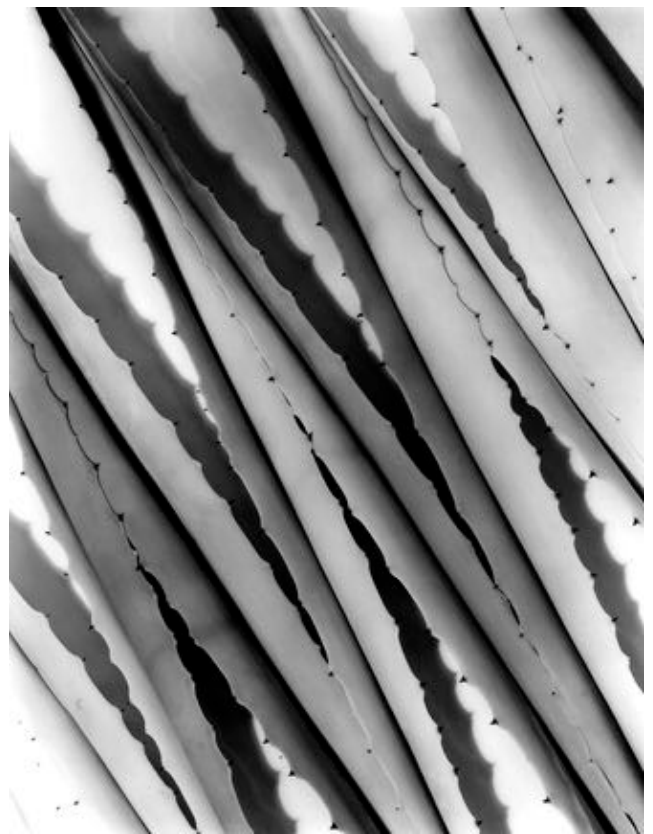


Fig 15: "Agave Design 2" by Imogen Cunningham 1920

He believed art should be able to engage the spectator spiritually as well as socially – thus accommodating abstraction and realism simultaneously. His most significant image “*Wall Street 1915*” incorporates this idea. It offers the spectator an objective, “*straight*”, record of a street scene showing people walking, with elongated shadows, and high contrast geometric shapes occupying the majority of the frame in repetition.

Inspired by Cubists, Strand found his doctrine, “*All good work is abstract in its structure*” and this is quite evident in his work “*Abstraction, Twin Lakes, Connecticut*” (Refer Fig 14). The picture shows a round table placed on a terrace, with sharp shadows forming thin stripes and a large bright triangle. The high contrast, evident geometric shapes, and a large curve that starts from left bottom to the top right form a strong composition.

2.1.2.3 Imogen Cunningham

An American photographer and a key member of the f/64 group of the west coast, Imogen Cunningham’s photography career spanned over Pictorialism, Modernism and Documentary Photography. Young Cunningham got interested in photography after seeing the works of Gertrude Kasebier. After her college days she assisted Edward Curtis and learned the platinum printing process.

Early known, famous work of Cunningham is “*Dreamy (1910)*”, a perfect example of pictorialist style. During 1920’s she started working in the

geometric style of straight photography with sharp focus and vivid light, the major characteristics of modernism. Cunningham was particularly interested in photographing flowers and abstracting the shapes of the petals and leaves. She even conducted an extensive study of Magnolia flower. More photographers epitomize the significance of natural form in her abstract images. While focusing on a texture and light, her style showed her feminine interests.

Ansel Adams once said:

“... her prints could have been produced only by a woman, which does not imply they lack vigor. All her photographs brim with a restrained strength typical of keen decisive feminine energy.”

Edward Weston and Alvin Langdon Coburn were the major influences of Cunningham in Abstract photography. Interested in the minor details, she exposed the visually profound in the mundane.

Cunningham studied the Agave plant in her garden, creating abstract shapes with triangular black and white shadows. The image shows semi-silhouetted leaves, against a background of high contrasted black and white. The image is not fully abstracted, leaves a hint about the organic shape (Refer Fig 15).

2.1.2.4 Alvin Langdon Coburn

Alvin Langdon Coburn is a prominent figure among the American Pictorialist photographers. Until the decline of Photo-Secession he was instrumental in his portrait project to master the craft of portraiture, which gained him the name

“youngest star” of photography. Coburn and Steichen are the only two who could have one-man exhibitions at the Gallery 291. Coburn was inspired by the emergence of the radical, avant-garde movements in painting and sculpture. Cubism and Futurism were at the peak in revolutionizing the art world. Vorticism, developed from Cubism and Futurism, instead of merely displaying dynamic movements aimed to expose the inner energy of them. Influenced by Ezra Pound, Coburn got interest in Vorticism and made Kaleidoscope-like equipment – clamping three mirrors together in a triangle. He then placed his lens through it and photographed the multiple reflections and names the photographs as “Vortographs”.



Fig 16: “Vortograph” by Alvin Langdon Coburn 1917

Vortographs included abstracted images that made use of horizontals and verticals, reflections, and multiple exposures. His most famous Vortograph, “Vortograph of Ezra Pound”, shows a silhouette of Pound’s profile, framed by a pattern of horizontal, vertical and diagonal beams. Coburn says,

“... the artist no longer photograph what is in front of the camera, but use one’s element of design instead...”.

Mike Weaver, an art historian comments that,

“... the Vortographs represent a momentary lapse in favor of abstraction, when evoked meaning gave away to pure form...”

Thus Coburn gained the name of first person to create abstracts through photography.

2.1.2.5 Harry Callahan



Fig 17: “Telephone Wires” by Harry Callahan 1945

An autodidact in photography, from Detroit, Harry Callahan was invited by László Moholy-

Nagy to teach at the Institute of Design Chicago due to his varied experimental photography. Callahan established Photography department at the Rhode Island School of Design. He photographed his wife and daughter and the streets, showing a strong sense of line and form, and light and darkness. His approach to abstraction followed various methods – Stark high contrast renderings, complicated multiple exposures, and cropped details of torn signs. Callahan’s tendency toward graphic rendering and linear design played a key role in his photography. He shot city lights at night, by moving a 35mm camera with an open shutter – gestural abstraction. The “*Telephone Wires*” are high contrast renderings of overhead wirings made with a twin-lens Rolleicord and an 8x10 view camera, creating perceptual ambiguity. He created images confusing orientation and counteract perception, through a ground glass moving around him.

2.1.2.6 Aaron Siskind

Aaron Siskind started his career as a social documentary photographer and later on he stopped creating representational images to take up abstraction in 1940’s. He captured graphic patterns, shapes and forms around him. By colorful composition, he could transform stands of seaweed on the sand into an imagery of calligraphic brushstrokes, peeling paints into low-relief sculptures. Influenced by Abstract expressionists he travelled with them creating abstract photographs of his language. With the

flatness of the picture plane, close-up framing, emphasized texture, line, rhythm he created images of real world with a modernist concern. He has combined straight photography and abstraction.

“*Metal Hook (1940)*” focuses on the abstract visual language of ordinary object. The curves, texture in the ground, rusty metal with an emphasis on form creates an image that abstracts reality. “*Jerome, Arizona (1949)*” is a photograph of peeling paint on a wall, gives the feel of flatness and sculpting. The composition is formed by placing the large darker areas in the center with heavy texture, balanced with small dark areas and delicate lines. “*Jalapa 66 (1974)*” is a photograph from graffiti. This is a square format image composed to balance with two semicircular shapes on both side and vertical line in the middle. The higher contrast gives a feel of shadow in the frame and dripping lines add to the texture and pattern.

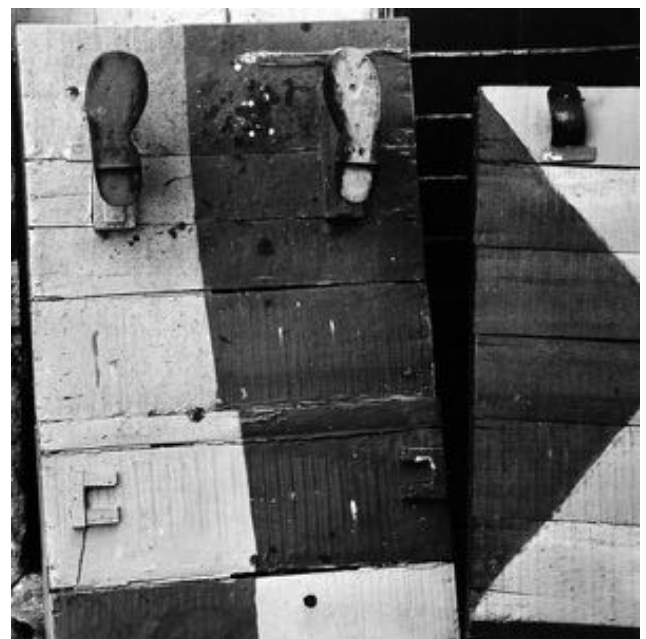


Fig 18: “*Recife (Olinda) 8*” by Aaron Siskind 1968

“*Recife (Olinda) 8 (1968)*” is a photograph of a rather mundane object – pair of foot template. The unevenly divided plank is leaning on a wall, painted half black and half white. Another plank with a different painting is half included. The frame encompasses a darker arrow shape in the center – together, dark areas read an arrow towards right and footsteps toward up.

2.1.2.7 Edward Weston

Edward Weston is a famous American Modernist photographer. He could transform normally mundane objects into marvel works of art through high-resolution realistic photographs of organic forms. He cofounded f/64 group in the west coast. Edward Weston once said,

“Good composition is the strongest way of seeing”

The still life photographs are detailed, close-up examination of isolated forms. Photographed during long exposure sessions, the physical forms of common objects are accentuated and intensified. The nude figures retained the same aesthetic aversion to recording the recurrent rhythmic patterns of coming and going. The images often show close-up views of partial figures rather than whole ones. Janet Malcolm says,

“The nudes are sexless and impersonal. Bodies transmuted into forms that follow no mere human function; even those showing pubic hair show it with formal rather than erotic content.”

“*Cypress Root (1929)*” and “*Eroded Rock (1930)*”

show that Weston was limiting his imagery to single isolated forms. Shelley Rice reviews,

“The participatory nature of the new action aesthetic led to a decisive shift in Weston’s verbal statements about the relationship between his photographic images and his own subjectivity, a shift which is clearly evident in the photographer by the mid 1930’s”.

“*Surf, Point Lobos (1947)*” shows gnarled and furrowed rocks, their irregular carved forms photographed with precise detail; are pounded by the breaking surf. The image emphasizes the intense contrasts of dark and light between water and land. Death is the theme here, not the beauty of pure and static form.

Edward Weston most often uses a “normal” lens. This lens does not make the projected image appear to be either closer or farther away than it really is. Thus Weston’s photographs assert the values of stability, permanence, concreteness, and intelligibility.

Alfaro Siqueiros review Weston’s works as,

“In Weston’s photographs, the texture, the physical quality of things is rendered with utmost exactness: the rough is rough, the smooth is smooth, flesh is alive, stone is hard... The things have a definite weight and volume and proportion, and are placed at a clearly defined distance from one another.”

“*Pepper No. 30*” is the most famous among his pepper series (Refer Fig 19). Weston captures a solitary, oddly shaped, bell pepper carefully placed

inside a tin funnel that reflected light above so as to highlight the object's bulbous contours. He tried numerous times to get the contrast and the sharpness as he intended before he succeeded with an $f/240$ aperture for 4hrs exposure. The result is

an anthropomorphic vegetable looked like two intertwined lovers.

In this section the famous Abstract photographers were studied.

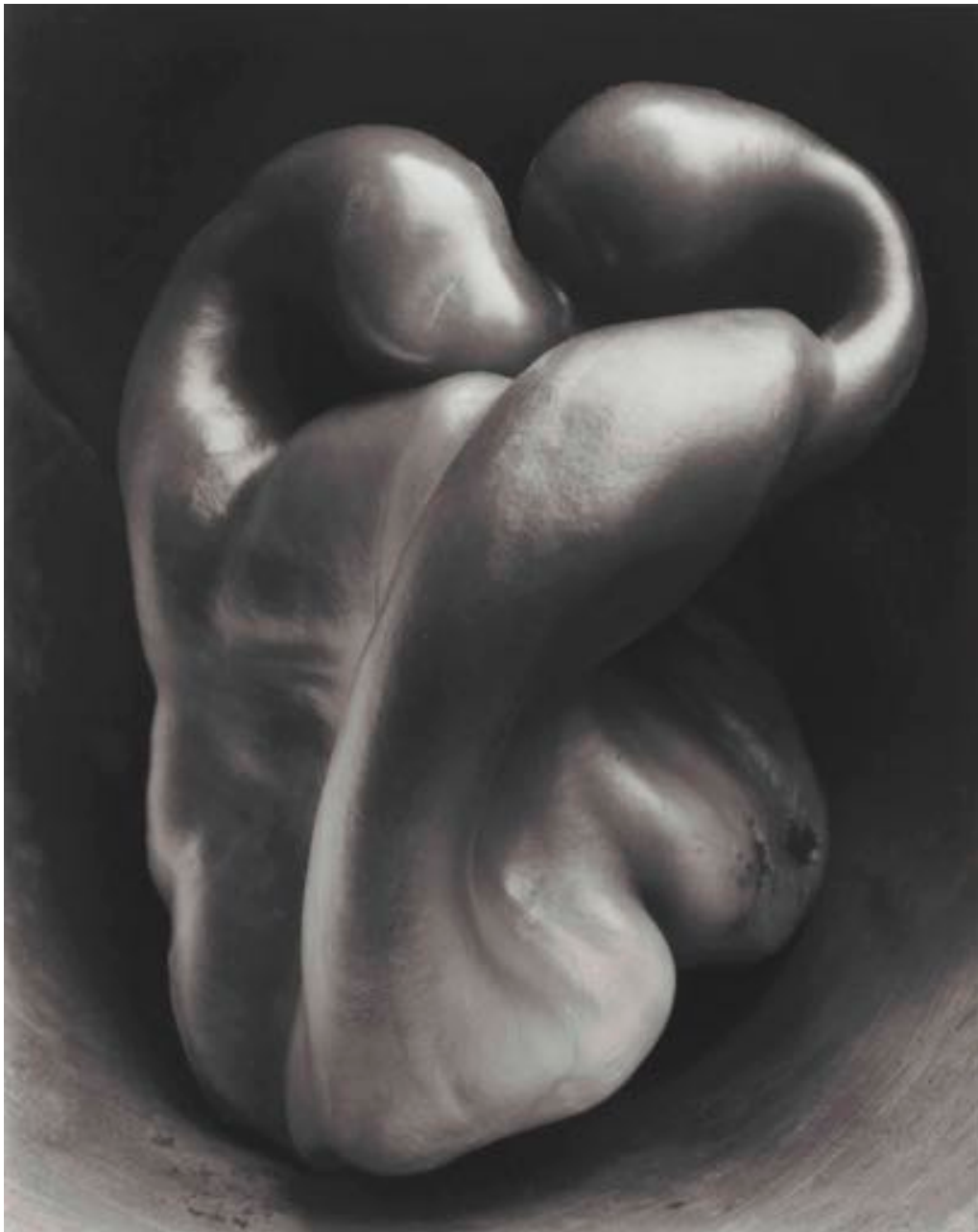


Fig 19: "Pepper No 30" by Edward Weston 1930

3. THE ART OF COMPOSITION

“Composition in art may be said to consist of the selection, arrangement, and combination in a picture of the objects to be delineated, so as to produce an agreeable presentation of forms and tones, to tell the story which is to be elucidated, and to embody the spirit of what it is intended the picture shall present or suggest”

Henry Peach Robinson explains in his book *“Pictorial Effect of Photography”*.

All art forms require composition to make it more powerful, more compelling, and more expressive. Art must have an orderly and harmonious groups of various elements in work and arrange the lines and masses so as to get a pleasing relation one to another. Composition is the means of bringing viewers into the photograph and holding their attention long enough to read the commentary and define their own feelings. To understand the term *“composition”* better we need to know the physiological aspect of *“seeing”*.

Human eye does not see whole scene at once. It views the world in small chunks, and then puts the pieces together to form the complete picture. The brain processes this random data and puts it all together, while identifying familiar objects, at a furious pace. While studying the scene the eye stops at prominent objects and sees them with real clarity, filling in the rest in a rather fuzzy manner.

Thus if we see it in the reverse order, an artist can direct the viewers first to see the elements that the artist wants them to see most prominently and remember longest. Next, they notice the objects of secondary relevance and so on. With good composition the artist leads viewers through the photograph in a controlled manner. Hence Edward Weston said,

“Good composition is the strongest way of seeing”.

Let’s break the aspects of good composition into two – unified thought and simplicity as Bruce Barnbaum suggests. Unified thought means that all elements of the photograph work together, i.e. a central concept underlie the photograph. Simplicity talks about how a photographer translates a complex situation into a simple message for the viewer without ambiguity or confusion through good composition. The unified thought and simplicity add to the strength of a photograph as Edward Weston mentioned above.

3.1 ENTERING AND EXITING A COMPOSITION

A photograph should invite the immediate attention of a viewer, which is only possible through a good composition. There should be a particular area or element of interest which brings in the viewer’s attention and that should not be ambiguous. This is the subject, which is the primary among the hierarchy of the elements. The remaining elements are there to balance out and lead the eye through the whole.

Once the viewer attention is procured, a good photograph can keep the viewer within the whole system, allowing him to take a journey as intended and designed by the photographer before properly exiting the photograph. Master photographers employ various mechanisms to make the viewer journey possible. If there is a break in between or the viewer does not know where to go, he would move on to the next image abruptly, without a gracious exit.

Lets take a quick look at Lewis Hine's "*Mechanic at Steam Pump in Electric Power House, 1920*".

The photograph's subject is, obviously, the mechanic at action. The prominent geometric shape is circle; everywhere. Studying the elements, a human figure in a bend over posture with a long spanner in his hand tightening (or loosening) the nut on a huge valve (or opening). The human figure is encompassed in this huge circle, with numerous nuts of high contrast. On top of that there is another smaller circle, which could be another valve. This whole thing is framed in another curved large pipe. In the darkest area we can see another turning wheel.

When a viewer first sees this image, his attention will be at the mechanic – for three reasons: (1) human figure is more attention seeking than any other element (2) high contrast, highlighted area, and (3) frame in a frame (a stronger attention seeker). Through his curved back the viewer gazes to his lowered head, onto his muscled hands (as it is a continuous curvature) passing to the spanner and reaches the circular valve. The radiant nuts

arise curiosity and viewer travels through the varied circles in the photograph, reaching the outer frame and exits elegantly.

Thus we can infer that Lewis Hine used, frame-in-frame, radiating points, strong geometric shape (circles here), high contrast, repetition (circles) and dynamic symmetry as the compositional techniques. This photograph fits into a root five dynamic symmetry grid and the mechanic is placed along the Sinister diagonal to accentuate the tension. The lengthy spanner handles lies parallel to a reciprocal diagonal. Thus it makes a stronger composition with an elegant entry and a gracious exit.

The exit has to have a logical direction as well as a visually pleasing path. Another example can be checked here: "*Girl Reading a Letter at an Open Window*" by Johannes Vermeer. The girl is the dominant subject in this composition. Once the viewer moves on from the girl, after relishing the details of her reading the letter, onto the curtains on the right, next to the red curtains near the top of the window frame, passing the table, back to the letter, rotates around the girl's arm, head and finally exits through the window.

3.2 ELEMENTS OF COMPOSITION

Various historians, theoreticians and photographers have compiled multiple lists as the elements of composition based on different contexts. Here the areas of interest are the visual

elements with which we build a system as designed by the composition:

LINE :: SHAPE :: TONE :: COLOR ::
TEXTURE :: SPACE :: FORM

Every art works start from a point, multiple points forms a line – the line drawing. Lines crossing over one another give a shape. The shape gets the feel, emotion or significance with the addition of tone and color onto that. When shapes are repeated we get the pattern. Shapes can be projected into three dimensions with the help of light and shadow we get form. We can even render the surface of form with roughness or anything of interest to create texture. The whole photograph is residing on space – positive and negative. Positive space contains the elements like line, shape or patterns. Negative space comprises of the space which does not have any elements and which is prominent in balancing the whole photograph. Sometimes texture fills the negative space too.

3.2.1 Line

Line can be used to suggest shape, pattern, form, structure, growth, depth, distance, rhythm, movement and a range of emotions. If we look at the psychological qualities of line:

- Curved lines suggest comfort and ease
- Horizontal lines suggest stability and calm
- Vertical lines suggest height and strength
- Jagged lines suggest turmoil and anxiety
- Diagonal lines suggest tension and movement

How does line communicate the various expressive qualities:

- Freehand lines express personal energy and mood of the artist
- Mechanical lines express rigid control
- Continuous lines lead the eye in particular directions
- Broken lines express the ephemeral or the insubstantial
- Thick lines express strength
- Thin lines express delicacy

3.2.2 Shape

Shape can be natural or man-made, regular or irregular, flat or solid, representational or abstract, transparent or opaque, positive or negative, geometric or organic, decorative or symbolic, colored, patterned or textured.

Behavioral qualities of shapes are:

- Squares and rectangle express strength and stability
- Circles and ellipses express continuous movement
- Triangles express a directive movement
- Inverted triangles express a sense of imbalance or tension
- Representational shapes attempt to reproduce what we see in daily life, expressing realism or familiarity
- Abstract shapes are formed by distorting the perspective of representational shapes. These shapes can be used to express an emotion
- Organic shapes express a sense of formation and development, suggest qualities such as softness, sensuality, flexibility and fluidity

3.2.3 Tone

Tone defines the lightness or darkness of a color.

Various expressive qualities of tone are:

- Tone can be adjusted to create a contrast of light and dark
- Tone can create the illusion of form
- Tone can create a dramatic or tranquil atmosphere
- Tone can create a sense of depth and distance
- Tone can create a rhythm or pattern

Chiaroscuro technique heavily uses the dark, mid and light tones for expressing the intensified mood of the image. Picasso applies the intelligent use of tones in his painting “Guernica” to express the high stylized drama.

3.2.4 Color

Color has the strongest effect on our emotions and it is used to create the mood or atmosphere of an artwork. Color can be used widely as light, tone, pattern, form, symbol, movement, harmony, contrast, and mood. Applying the color wheel and the psychological qualities of each color, an artist designs his best composition.

To grab a viewer’s attention, a saturated or intense color can be used. An arrangement of high contrast color also seeks attention in a composition. A photographer uses a blue color, to create a feeling of calm and serene. While green color often communicates a feeling of lushness and freshness. The warm colors yellow, orange and red can be used to show warmth and comfort.

3.2.5 Texture

Texture defines the surface quality of a photograph – the roughness or smoothness of the material. Texture is one of the most intriguing and mysterious aspects of photography. It stimulates the sensation of touch, which brings up close and personal.

Different light source will bring out different texture qualities. Front lighting emphasizes sharp, bold, contrasty textures. Side lighting creates fine shadows that accentuate detailed textures and the surface qualities of a 3D object’s form. Diffuse light helps to appreciate the subtle tones of smooth, silky textures.

Texture can create various sensations – sharp, silky, gritty, bumpy, scratchy. Texture in photography can activate very personal, deeply felt experiences that cannot be fully explained by words.

3.2.6 Space

Encyclopedia Britannica defines space as,

“... a boundless three dimensional extent in which objects and events occur and have relative position and direction...”

Positive, negative, implied or real, all these attributes apply to space and its representation and use in art. Positive space is represented by a highlight or object, and negative space is open or shaded.

Space can either be a flat area or have volume. An enclosed space is usually called “shape” while an

unenclosed shape is simply “space”, but the two are inseparable and have a powerful and complementary relationship.

Space as ground:

- Positive distance to determine how shapes, lines and spatial divisions relate
- Provides rest and relief in pattern, a visual interval similar to a rest in music or a pause in speech
- Locates an object in position and gives stability

Space conveys both physiological and psychological effects. Physiologically, it contributes to the illusion of size and perceptions of length. Psychologically large unbroken spaces are serene, bold and dramatic. Small and broken spaces suggest delicacy and complexity.

3.2.7 Form

Form relates to the physical volume of a shape and the space that it occupies. It can be representational or abstract. Form basically creates the illusion of 3D on a 2D surface.

Geometric forms that are mathematical, precise and basic geometric forms are: sphere, cube, pyramid, cone and cylinder. Organic forms are those that are free flowing, curvy, sinewy, and asymmetrical.

The illusion of three-dimensional form is conveyed through the use of lighting and shadows, and the rendering of value and tone. Shape is defined by the outer contour of an object which is how we first perceive it and begin to

make sense of it, but light, value and shadow help to give an object form and context in space so that we can fully identify it.

Lets take a single light source lighting a sphere. The highlight is where the light hits directly; the mid-tone is the middle value on the sphere where the light does not hit directly; the core shadow is the are on the sphere that the light does not hit at all and is the darkest part of the sphere; the cast shadow is the area on surrounding surfaces that is blocked from the light by the object; reflected highlight is light that is reflected back up onto the object from the surrounding objects and surfaces.

The greater the contrast in value, the more pronounced the three-dimensional form becomes. Forms that are rendered with little variation in value appear flatter than those that are rendered with greater variation and contrast.

Historically, the Baroque artists such as Caravaggio explored the nature of space, light and the three-dimensional experience of space further through the use of chiaroscuro, the strong contrast of light and shadow. The portrayal of human form became much more dynamic, with chiaroscuro and foreshortening giving the forms a sense of solidity and weight and creating powerful sense of drama. Modernism freed artists to play with tone more abstractly.

Plato was the first thinker to introduce the concept of form. According to him, form is that one element shared by both tangible and abstract phenomena in the world. Aristotle said that the

emotional relief in art could only be achieved if the work is dominated by its structure. Immanuel Kant comments that, only the form of an art object can be judged equally by different people, equally leading to pleasure.

Art historian Willy Rotzler claimed that throughout history, mankind has always used geometry to create an alternative vision that reflects a “*primary expression of the shaping will.*” Art historian Alfred Barr believed that there are only two types Modern Abstract arts – Geometric and Non-Geometric. Relieving from the organic form towards geometric form tries to achieve a pure form as the art historian Herbert Read comments,

“...the human traditions as such together with their organic criteria, in order to create values of a different kind, the absolute value of “pure form”...”

3.3 FORM EXPLORATIONS

A good composition comprises of universal aesthetic principles in it. Principles are those aspects, which are implicit and active in the structure and appearance of a composition. Principles are present in all the effective art forms in different nature and significance. There are various schools of thoughts about the principles in visual composition however, there makes an interesting sequence of gradually increasing complexity of experiences in an order. For better understanding aesthetic principles can be grouped according to their relative effect in two types. In first type they are physical and visible in the

composition, and in second they are, felt and invisible in a composition. Generally, there are seven principles considered in an order of growing complexity — pattern, rhythm, contrast, unity, proportion, balance, and harmony. While Arthur Wesley Dow says,

“In my experience these five have been sufficient: Opposition, Transition, Subordination, Repetition, and Symmetry - five ways of creating harmony, all being dependent upon a great general principle, proportion or good spacing.”

Though it has been termed differently they talk about the same principles of composition. The principles of composition can be classified into broader groups – Directional, Synthesizing and Highlighting. Directional principles comprises of those, which take the viewer’s gaze in a particular direction within the composition. While, Synthesizing principles see the whole composition as a single unit, and explains the relation between each element used in the composition. And Highlighting principles are used to emphasize a particular element or area within the composition.

3.3.1 Directional

Repetition, Parallelism, Sequence, Alternation/Variation, Gradation, Transition, Radiation and Rhythm are considered the directional principles of composition.

Arranging same objects at different places in the composition can create “*repetition*”, the simplest and most fundamental of all design principles. Eye

moves from one position to the next, which emphasizes the direction of movement. Repetition can be with regular and irregular spacing too.

Regular vertical spacing of horizontal lines will be perceived as a strong vertical direction and reduce the widening effect of the horizontal line.

Irregular spacing of horizontal lines in a vertical direction retains the widening effect of the horizontal lines. Regular repetition is soothing and reassuring while, irregular repetition helps objects relate subtly.

Use of lines lying on the same plane equidistant at all points and never meeting or converging, called “*parallelism*”, gives the viewer a sense of direction, while the directional effect reduces with increasing number of parallels.

“*Sequence*”, is obtained when we have different objects placed in a particular order one after another, a regular succession. It builds a sense of climax and release in the mind of the viewer.

Repeated sequence of two and only two things that change back and forth in the same order; a specific combination of repetition and sequence, creates “*alteration*”.

Sequence of adjacent units that changes consistently and distinctly in steps from one unit to the next creates “*gradation*”. The longer the graduated sequence the greater the climax; evokes illusions of depth.

A smooth, flowing from one condition and position to another with no break point, step or

distinct place to pinpoint the change, denotes “*transition*”. Gradation is distinct while; transition is gradual and subtle. Transition is a linear principle, emphasizing its direction on the object. It creates a smooth, graceful, sinuous, flow.

“*Radiation*” is like the emission of rays from a central source. It controls attention powerfully. Radiating lines in a pattern enlarge outer edges, coherently.

“*Rhythm*” gives the feeling of organized movement or an arrangement of internally organized motion. Rhythm does not require repetition but gains strength from it. Emphasizes the direction in which the movement flows. Psychological effects: satisfying if predictable; shorter or smoother is calming; barely suggested is more sophisticated; the longer the development to climax the more exciting; understatement is more potent.

3.3.2 Highlighting

Concentricity, Contrast and Emphasis are the major highlighting principles of composition.

“*Concentricity*” is a progressive increase in size of layers of the same shape, each with the same center. It forces the focus of attention to a central point and the part of an object on which it appears directional attention leads the eye inward to center. Concentricity moves the eye in the opposite direction from radiation: concentricity leads the eye from the outside toward the center; radiation leads the eye from the inside to the outer edge.

A feeling of distant differences with the accent on the differences gives “*contrast*”. Juxtaposition of opposites heightens differences and creates simultaneous contrast: defines and stabilizes the way an element is used at that point; emphasizes and enlarges the area where it occurs. Contrast is invigorating and dramatic; the stronger a contrast the more assertive the effect; a bold contrast overwhelms a delicate mood; too much contrast is confusing.

“*Emphasis*” is the creation of a focal point, center of interest to which all others are subordinate, the dominance of one feature. It can attract the attention is focused on part where it occurs and diverts attention from other areas.

3.3.3 Synthesizing

Proportion, Scale, Balance, Harmony and Unity form the synthesizing principles of composition. “*Proportion*” adjusts the relationship of distances, sizes, amounts, degrees, or parts in relation to each other. The golden mean or golden section is a proportion that “feels” comfortable and looks “right”. It is a proportion that invites repeated comparison, analysis, and reflection, holding the viewers attention. “*Scale*” is the Consistent relationship of sizes to each other and to the whole regardless of shapes compares only sizes not other qualities. Large shapes are bold, aggressive, assertive, straightforward, and casual; and on the other hand small shapes are fragile, delicate, and pretty. “*Balance*” gives the feeling of evenly distributed weight, equilibrium, steadiness, repose, stability, and rest. Horizontal balance is

between the right and left sides; Vertical balance is between the upper and lower portions of an object; radial balance integrates the whole around a center of gravity. A strong sense of balance will give a feeling of security and stability. “*Harmony*” is the agreement in feeling, consistency in mood, pleasing combination of all parts relating. Sense of oneness, coherence, totality, quality of being whole and finished, sense of completeness; all parts add up to a whole gives “*unity*”. There can be harmony without unity and there cannot be unity without harmony.

3.3.4 Balance

Balance means equality between the left and right halves of a photograph. This can translate into tonal balance or subject/interest balance. Just like a seesaw, in which a heavy object near the fulcrum balances a light object at the other end, an important object near the center of the image “*balances*” objects near the opposite edge. Dark tones on one half of the image are balanced by dark tones on the other half. An important object, either large or small, placed near the edge of a photograph without a comparably important object on the opposite side creates an imbalance. Imbalance of either tonality or subject interest often creates tension within the viewer, while balanced compositions are more relaxing and comfortable.

Mechanical balance principle can be applied to composition. Two black masses balance each other perfectly because they are of equal size and weight, and are at the same distance from the

center. If one of these spots is gray or white, the two will not balance in these positions. It is because the gray or white mass is lighter in tonal value and, to balance the black mass, size must be increased.

On the principle of the steelyard, the farther from the center and more isolated an object is, the greater its weight or attraction. Therefore, in the balance of a picture it will be found that a very important object placed but a short distance from the center may be balanced by a very small object on the other side of the center and further removed from it.

There are four ways to balance a composition. The first one is “*symmetrical*” or “*Formal*” balance. A symmetrical balance occurs when equal weights are on equal sides. This is the most pure form of symmetry. The half of the composition mirrors the other half and it becomes difficult to change anything. There are various types of symmetrical balance too – “*Reflection*”, when everything is mirrored around a central axis; “*Rotational*” or “*Radial*” symmetry, when everything rotates around a common center; “*Translational*” symmetry, when elements are repeated over different locations in space.

The second, “*asymmetrical*” or “*informal*” balance comes from unequal visual weight on each side. One side might be dominating whereas the remaining might have lesser focal points. This balance is more interesting as compared to the previous one. It evokes feeling of dynamism, vitality and energy. It feels very strong and stable.

While trying to achieve an asymmetrical balance, we have to consider these - a large form is heavier than a smaller form; dark values are heavier than light values; a textured form is heavier than a smooth form; a complex form is heavier than a simple form; two or more smaller forms balance one large form; a smaller darker form balances a larger lighter form.

Next is “*Radial*” balance – the element radiates from a common center. In this type of balance, maintaining a focal point is easy because it’s always in the center. There is a strong point of attraction as everything radiates from center and leads to center.

The last one, “*Mosaic*” balance results from a balanced chaos. The abstract paintings are best example of mosaic balance. Though it lacks distinct focal points and elements share a uniform emphasis, but somehow it all works together.

There are “tonal”, “color” and “conceptual” balances too, but they can be fit within one of those mentioned above. Tonal balance can be seen more evidently in black and white. Balance can be seen in terms of contrast between the light and dark areas of the image. A darker mass on one corner can be balanced with a visible equal size lighter mass.

Brighter colors feel heavier than neutral colors, which is why a bright color within a photograph can easily balance out a scene that would otherwise be too heavy on one side. If we take an example of a photograph of a red house in a large

green/yellow grass field with a blue shaded river on the lower edge, the aggressive red color is balanced out by the blue and green/yellow colors in the rest of the image. By keeping only one heavy color in the image – offset by a greater abundance of light colors – the composition feels well composed and balanced.

Before introducing a conceptual balance in an image we have to make sure that a symmetrical or asymmetrical balance is achieved in the image. Based on the context of the message we are conveying through we can create a conceptual balance in the image philosophically. The juxtaposition of industrialization and nature is an example of creating a conceptual balance in the image. A homeless child, desperately, craving at a rich kid enjoying his meal in a well-balanced street scene can be another example too.

3.3.5 Rhythm

In composition, rhythm is the regular, harmonious recurrence of a specific element, often a single specific entity coming from the categories of line, shape, form, color, light, and shadow. If a photographer chooses elements from these categories and creates a composition of these elements, then a motif or pattern is generated. The photographer could also repetitively apply a single element, a composed motif or pattern to generate a harmonious composition, a rhythm is created.

In photography, rhythm is made by form repetitions. As long as the basic element is

repeated with an ordered sequence, a pleasant pattern will be created and would be identified as a rhythm. The phenomena of such a visual attraction will generate a pleasant environment for living, working, and recreation.

Different types of rhythm are: Regular, Alternating, Random, Flowing and Progressive. “*Regular*” rhythms and patterns have identical motifs or visual beats and they have an equal amount of space between motifs. “*Alternating*” rhythm and pattern can be achieved by changing motifs at regular intervals. In “*Random*” rhythm the motif is repeated in no apparent order. “*Flowing*” rhythm in composition is created by repeating wavy lines and curved shapes. In “*progressive*” rhythm there is a change in motif or visual beat each time it is repeated. Rhythm in a composition can be the reason for the easy movement of the viewer’s eyes following a regular arrangement of elements in the artwork. If elements are placed in a predictable manner they form a pattern.

3.3.6 Pattern

Repeating or echoing the elements of an artwork, to communicate a sense of balance, harmony, contrast, rhythm or movement in the composition, constructs pattern. Two basic types of pattern: natural and man-made. Both of them can be regular or irregular, organic or geometric, structural or decorative, positive or negative and repeating or random. Natural patterns can be seen in the shape of a leaf, the branches of a tree, the structure of a crystal, the spiral of a shell, the

symmetry of a snowflake, and the camouflage and signally patterns on animals, fish and insects.

Man-made patterns are used for structural and decorative purposes. An artist may create a basic composition with pattern of lines and shapes. A decorative pattern of color, tone and texture can be added too.

Geometric patterns show straight lines, circles, triangles, rectangles, and polygons, as well as variations and combinations of these shapes – squares, ellipses, cylinders and pyramids.

Geometric patterns tend to be symmetrical. They give the feel of orderliness, formality, certainty, strictness, efficiency, predictability, accuracy, precision and perfection.

Organic patterns are formed with shapes seen in nature – leaves, flowers, rocks, waves, contours of mountains and shores etc. Organic patterns create the mood of peaceful, calm, connected and comforted.

3.3.7 Harmony

Harmony is the pleasing agreement of objects or combination of objects in a composition. It is about creating a visually stimulating image by combining similar elements throughout the frame. Some elements that can be used are color, shape, and texture - adjacent colors, similar shapes, and related textures. All harmony and no contrast can become monotonous. A balance between areas of harmony and areas of contrast is needed. The area of contrast should be kept smaller than the large harmonious area; a visually

satisfying balance is achieved.

According to the principle of general harmony, in order to compose a pleasing image, it is necessary to combine agreeable objects along with connecting affinities between them. Harmony is established between the different parts of the same object, by means of the proportion of the parts, volume or superficies, the form and the color. Symmetry is one condition of harmony.

Harmony is established between different objects by means of an analogy of size, of form, and color; by means of symmetrical position, by means of the repetition of the same form, of the same color, or of the same object, or even of analogous objects, if they are not identical.

3.3.8 Contrast

Contrast in photography is the visual scale of different tones or color in an image. An image with high contrast will have a full range of tones from black to white, with dark shadows and bright highlights. On the other hand, a low contrast image, won't exhibit a huge difference between the lights and darks, and as a result, it might appear flat. Contrast can occur “*visually*” or in “*subject matter*”. Visual contrast can be achieved using value, color, form or texture. A philosophical opposition can bring a contrast in subject matter. For example if we portray a day and night in the same composition, it will result in contrast of subject matter.

The title of the artwork, “*The Gift*”, belies its content and presents a contrast between our idea

of what a gift is and what this object represents. An iron, normally used to press clothing, is lined with tacks that would prevent normal use of the object. Man Ray offers a visual pun and a Surrealist viewpoint of life.

There is contrast when a form is surrounded by a blank space. There is contrast when straight line meets a curve. There is contrast when one form is much bigger than another. There is contrast when vertical and horizontal directions coexist. Let's take an example: Form A may appear contrasting to form B, but when form C is brought in, forms A and B may appear similar rather than contrasting to one another, both of them can be contrasting to form C in varying degrees. Contrast is a kind of comparison whereby differences are made clear. Two forms can be found similar in certain aspects and different in other aspects. Their differences become emphasized when contrast is created. A form may not look huge when it is seen alone, but may appear so against tiny forms next to it.

Based on a form, visual contrasts can be divided into: Contrast of shape, Contrast of size, Contrast of texture, Contrast of direction, Contrast of position, Contrast of space, and Contrast of gravity.

“*Contrast of shape*” – there is contrast between a geometric shape and an organic one, but two geometric shapes can be in contrast if one is angular but the other non-angular. Other situations of contrast of shape are: curvilinear/rectilinear, planar/linear,

mechanic/calligraphic, symmetrical/asymmetrical, beautiful/ugly, simple/complex, abstract/representational, and undistorted/distorted. “*Contrast of size*” exists between big/small among planar forms and long/short among linear forms. Some typical cases of “*contrast of texture*” are smooth/rough, fine/coarse, even/uneven, matte/glossy etc. “*Contrast of direction*”: Any two directions meeting each other at an angle of 90 degrees are in maximum contrast. Two forms directly facing each other create a directional contrast. “*Contrast of position*”: the position if a form is recognized as related to the frame, the center, the structural subdivision that contains it, the structural lines nearby, or another form. The common positional contrasts are: top/bottom, high/low, left/right, central/off-center etc. “*Contrast of space*” can be created with positive or negative spaces. When space is considered as illusory, forms may appear to advance or recede, to be near or far, flat or three-dimensional, parallel or unparallel to the picture plane, etc. all creates spatial contrast. “*Contrast of gravity*”: there are two types of gravitational contrasts – stable/unstable or light/heavy.

There are different types of color contrasts: (1) Contrast of Hue, (2) Light-Dark Contrast, or contrast of Value, (3) Cool-Warm Contrast, (4) Complementary Contrast, (5) Simultaneous Contrast, (6) Contrast of Saturation, and (7) Contrast of Extension or Contrast of Proportion.

“*Contrast of value*” is dependent on tinting and shading of the colors. Value is a description of an area’s relative lightness or darkness. Values help create forms and differentiate space or distance. Gradation of values within a space or shape creates forms, or the illusion of volume and mass. Value can create more emotional response than color. It is the main component of black and white photography. High value or high key images have a light, pure feel to them. High valued or high-key images illustrate lightness, airy, open, friendly spaces and aid the impression of confident success. Dark value or low-key images usually have a heavy or oppressive feel to them.

Using heavy darks in contrast with vibrant whites adds drama. The image of Margaret Horan by Edward Steichen, shot for Vogue Magazine, is a study in shapes, lines, forms, space and tones. Steichen could easily have used an overall darker palette but would have lost the drama and elegance of the image. A high-key treatment would have become too much of an abstraction dismissing the pose and human element.

To intensify the forms in an image we have to have a high tonal contrast. Thus a strong tonal contrast plays a major role in a good black and white image. Let’s take a quick look at the various color contrasts: “*Contrasts of hue*” come in degrees from high contrast to low contrast. The highest hue contrasts are those created using compliments, split compliments, and triangular color harmonies, of full intensity colors. A lower contrast of hue can be created by desaturation of

the same colors or by use of any analogous colors. “*Cool-Warm contrast*” is created while using warm or cool colors. From a psychological view, warm and cool colors are associated with experience. That is, warm colors are associated with excitement, energy and heat. The cool colors are associated with rest, calmness and cold temperatures. Physiologically, when comparing warm and cool colors of the same value or intensity, the warm colors will appear lighter or brighter than cool colors. They will also seem to stand forward of the cool colors, while the cool seems to recede back into the frame a bit.

“*Complementary contrast*” is created by using complementary colors in a composition.

Complementary colors are that exist on opposite sides of the color wheel. When they are mixed, the result is a neutral grey-black. When adjacent, complementary colors mutually intensify their luminosity to a maximum; when mixed, they extinguish each other to produce grey-black.

“*Simultaneous contrast*” – its effect is derived from the law of complementary colors, according to which each pure color physiologically demands its opposite color – its complement. If this color is absent, the eye will produce it simultaneously.

Strong green makes neutral grey next to it appear reddish-grey, whereas the effect of strong red on the same grey is a greenish-grey appearance. Any two complimentary colors will exhibit higher intensity contrast when side-by-side, than either color viewed alone. Simultaneous contrast was first identified by Michel Eugène. Dark colors and dark values look darker when exhibited against

light colors and light values, than if against dark colors and values. Light colors and light values look lighter when exhibited against dark colors and dark values, than if against light colors and values. “*Contrast of Saturation*” - contrast of tones and tints. The contrast can occur for a single hue or among differing hues. Saturation is controlled by using tints (the addition of white to a color), shades (the addition of black to a color), tones (the addition of any mixture of black and white to a color), or by mixing a color with its direct complement (eventually producing a grey). “*Contrast of extension*” is all about proportions.

It is contrast created by controlling the proportion of one color relative to the other. It is used to balance, or counter the balance of an image that is heavily weighted toward a single hue. It can also be used to affect brightness or intensity of a hue.

“*Metacontrast*” and “*Paracontrast*”: This involves both time and space when one half of a circle is lit for 10 milliseconds; it is at its maximum intensity. If the other half is displayed at the same time (20-25ms later) there is a mutual inhibition: the left side is darkened by the right half (metacontrast) and the center may be completely obliterated. At the same time, there is a slight darkening of the right side due to the first stimulus (paracontrast).

PART - II

4. ROCK FORMATIONS IN HYDERABAD

The states of Andhra Pradesh and Telangana (originally Hyderabad State) are rich in prehistoric material. The junction line of Deccan trap and the Archæan gneiss passes diagonally through it. The area is covered mainly by granites of Archæan age, which are highly weathered and fractured, being obliterated in the recent decades due to severe urbanization.

Hyderabad is located in Central Telangana and it is spread over an area of 260 km sq. The city lies within the Deccan Plateau and rises to an average height of 536 meters above sea level. Hyderabad's spectacular rock formations, grey and pink granites, are about 2500 million years old.

The granites of Hyderabad belong to the Precambrian shield type and consist of many rock types from Syenites to Alaskites. Precambrian rocks, such as Granite, Adamellite, Tonalite, Amphibolites, Hornblende biotite schist occupy a major part of the area. These formations were subjected to tectonic and green schist faces metamorphism. Except for portion in the western part of the district granites occupy most of the area.

Hyderabad's wonderful rock formations are being endangered by economic development. Unfortunately, rapid urbanization is taking its toll

on these spectacular architectures of nature. Due to hasty new constructions, and what rocks are left, are soon vanishing. Environmentalists are more concerned about the effect it can have on water management system. Geological studies show that rock formations have a crucial role on channelizing rainwater and thereby affecting the underground water system.

The "*Society To Save Rocks*" (STSR), with help from the government has been quietly and steadily working on saving these wonderful natural creations. It aims to preserve and protect the spectacular ancient rock formations of the Deccan Plateau, a natural wonder of stony ridges and hillocks shaped into picturesque balancing forms. To address the primary concern of protecting the rocks and to prevent the indiscriminate destruction of this natural, historical, and environmental heritage, a group of artists, photographers and environmentalists from Hyderabad have been working for the protection of this rocky landscape since 1992. In 1996, they formed themselves into a registered society, and since then, the STSR has expanded to include many other citizens, from students to housewives to businessmen and bureaucrats and has about 400 members.

4.1 HERITAGE SITES OF ROCK FORMATIONS

Andhra Pradesh is endowed with spectacular rocky formations, which are simply awe-inspiring. These natural monuments offer picturesque beauty and come in various shapes and forms –

boundless to viewer's imagination. It could be a mushroom or bear's nose. Or like a giant tortoise set in rock.

"*Bear's Nose*", "*Mushroom Rock*", "*Cliff Rock*", "*Monster Rock*", "*Tortoise Rock*", "*Obelisk*" etc., are names that have been given to these natural beauties. These formations can be found in various parts of the city and beyond, like the Central University Campus, in and around Hi-Tech City and Gachibowli, Old Bombay Road, near Nandi Hills and Mahindra Hills, close to Durgama Cheruvu, Jubilee Hills and Banjara Hills.

The first 9 Formations proposed by the Society in 1997 and protected under Regulation 13 of the HUDA Zoning Regulations 1981 are as follows:

- Rocks around Durgama Cheruvu
- Rock Park
- Bear's Nose
- Mushroom Rock, Hyderabad University
- Cliff Rock
- Monster Rock
- Tortoise Rock
- Toadstool Rock
- Obelisk

Another 15 sites have been notified as Heritage Precincts by the Government of AP, G.O. 68, on 3rd February, 2009:

- Sharmirpet
- Moula Ali and 2 adjacent Hillrocks
- Sentinel Rock, near Moula Ali Hills
- Pahar-e-Shareef

- Skull Rock
- United-we-Stand, Urdu University
- Pathar Dil, Urdu University
- Hamburger Rock, NITHM
- Fakhruddingutta
- Rocks behind Malkam Cheruvu
- Ghaar-e-Mubarak, near Taramati Baradari
- Peeran Shah Rocks, near AP Police Academy
- Rock on which Dattatreya Temple is situated
- Allabanda Hill
- Gangabowli ka Pahar

Due to access issues only the following sites have been selected these for this project: (1) "Hillocks around Durgam Cheruvu", (2) "*Rock Park*" near Khajaguda, (3) "*Mushroom Rock*", Formation in the campus of Central University of Hyderabad, Gachibowli and (4) Rocks at Maula Ali's Dargah, Maula Ali.

4.2 NATURAL FORMS IN ART

The external forms of rock have long inspired artists to create abstract art. Many forms in art are an expression of the internal fabric of rocks, and varied sizes. Thin-sections of rocks viewed under the polarizing microscope reveal a great variety of forms, colors and textures that have aesthetic appeal.

The abundant distribution of rocks throughout the environment makes them a common and sometimes inadvertent element of photographs

depicting natural scenes. Rocks are formed through igneous, metamorphic, and sedimentary processes that occur within the crust and mantle of the Earth. Geologic processes can lift rocky material to the surface, where physical and chemical weathering causes rocks to fragment and wear into smaller pieces.



Fig 20: Stonehenge VIII by Paul Caponigro

Chemical weathering also affects the size and shapes of rocks. The most common cause of chemical weathering is water, which dissolves rocks through the action of carbonic acid. Weathered rock fragments are transported throughout the environment by water, wind, and gravity. When moved about by these forces, rocks tend to accumulate at the bases of geological formations and around watercourses. Human

activities also redistribute rocks. Their use as building materials, decorations, and manufacturing feedstocks causes rocks to be deposited throughout built-up areas.

Construction activities such as excavation, blasting, and filling also tend to unearth, fragment, and redistribute rocks.

Aaron Siskind and Paul Caponigro frequently depict rocks in their photographs. Other photographers who have made notable images featuring rocks are Edward Weston, Bruce Barnbaum, and Ansel Adams.

In single rock compositions, often the arrangement of the rock with respect to nearby lines and shapes are used to balance and support the subject.



Fig 21: Rock Wall, Connecticut by Paul Caponigro

Including the patterns created by surrounding objects, rock is placed so that it has a harmonious juxtaposition. With multiple rocks, the points that line up to form implied lines and shapes are included.

Lighting plays a major role in conveying the rocks' appearance in photographs. The early morning or late afternoon light is used for images to achieve more even light and to reduce blown-out highlights or blocked-up shadows. In addition, the light is more directional, which

brings out the surface detail in rocks. Overcast skies also provide good lighting because of the diffused brightness and softer shadows. Shadows beneath rocks tend to be intense compared to cast shadows, and will block up as the brightness range of the scene increases.

PART - III

5. PREVISUALIZATION

“The term ‘visualization’ refers to the entire emotional-mental process of creating a photograph, and as such, it is one of the most important concepts in photography”

Ansel Adams’ famous Photography Series I – *The Camera* opens up with this note. As he meant photographic visualization is the confluence of imagination and technique. Photography involves a series of mechanical, optical, and chemical/digital processes which lie between the subject and the photographic print. As we make each step-by-step we are making a “*departure from reality*” to the photographic print.

As visualization is a conscious process of projecting the final photographic image in the mind before taking the first steps in actually photographing the subject, the skills involved are – seeing photographically, understand the tonal values of the scene, photographic controls required to emphasize the final image.

This section discusses the pre-requisite knowledge needed to procure the skills mentioned above, for visualization.

5.1 Aspect Ratio

Aspect ratio is a term used to describe the ration between the width and the height of an image. It plays a substantial prominence in the composition, but is often ignored. Lets take a look at the various aspect ratios used today.

1:1 – Square format, traditionally used in medium format cameras.

5:4 – Large format and sheet film cameras, mainly 8×10”.

4:3 – Broadcast television and video used this aspect ratio, originally in 640×480 pixel resolution; small sensor cameras and compacts have been using this aspect ratio ever since. Four thirds and Micro Four thirds are the larger consumer formats to use it; in medium format there’s also 645 which has the same aspect ratio for both film and digital.

3:2 – Double a movie frame; famously invented when Oscar Barnack rotated the film through 90 degrees and doubled the width of the frame to create the 24x36mm “*full frame*” 35mm camera format. Almost all larger sensed DSLRs use this today. It is believed that Oskar Barnack chose this aspect ratio for the first 35mm Leica cameras in early 20th century, because it closely matches the dimensions of the golden rectangle. The golden rectangle has its origins in Greek mathematics and is said to be an aesthetically pleasing ratio to use in photographs. Henri Cartier-Bresson is famous for his skill in composition and utilized the theory of the golden rectangle in the 35mm frame.

16:9 – HDTV format; not a native aspect ratio for digital still cameras, but useful to provide a more cinematic feel to an image.

2.35/2.40:1 – Motion picture widescreen for

feature films; very rarely used for still photography, and there are certainly no dedicated digital still cameras that offer exclusively this format. Not only is it extremely wide, if cropped down from a 4:3 sensor more than half of the image is thrown away.

Since this project is about the rock forms and it is needed to highlight the subject or concentricity 1x1 square format has been chosen. As a shape square offers following qualities – Stable and confident, less visually interesting, rigid, conventional, direct and straightforward, oppositional, and being straight edged it forms a contrast with circle or curves (natural shapes or lines).



Fig 22: Woman with a veil on fifth avenue, NYC by Diane Arbus

In a good composition square format adds to:

- Square is perfectly balanced shape, hence it encourages the viewer to move around within the frame, not side to side
- Square composition reduces clutter and make it simple

- Geometric shapes get prominence
- Subject can be centered

Square format cameras have been around a long time, starting with the Rolleiflex and Voigtländer TLR that were favored by professionals. In the 1950s Hasselblad joined in, later followed by Kodak.

Square format can be used for the following principles of composition:

- Balance – symmetrical
- Space
- Simplicity
- Shape
- Central subject

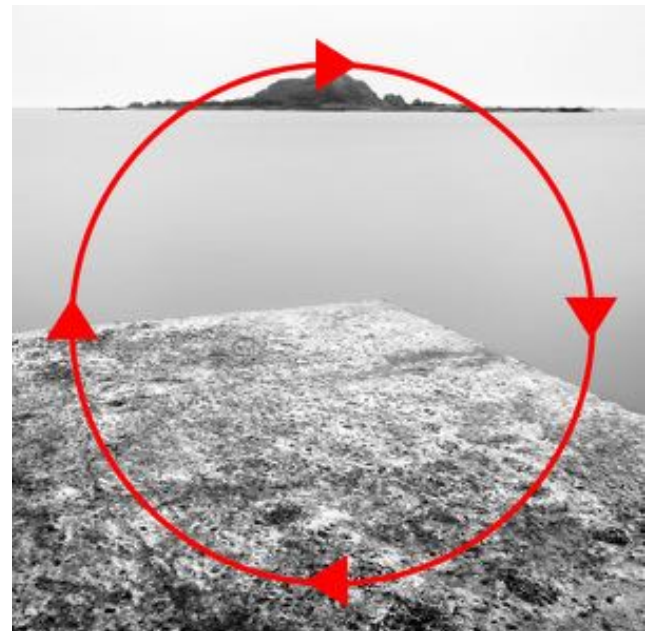


Fig 23: Square Format

Square images can be used in diptychs and triptychs more effectively. The overall effect feels very linear, regular, predictable, solid, definitive, and grounded – like a precisely rhythmic march.

5.2 Black and White Image

Since it has been decided to use the square format now its time to think whether to shoot in color or black & white. Following points substantiate the decision to go with black and white:

- *“Eliminates visual dominance of color”*: When distracting colors are out the key elements to shoot with are elements to include (or exclude), lighting and composition. It gives the space to concentrate on the relationship between subject and the background. To express more on the forms, texture and contrast black and white has been selected.
- *“See light differently”*: Light and dark and the interplay between the two contrasting elements can be stronger to focus on than color relationships. Light and the relationship with the subject (and the shadows that form) as well as other complementary elements become the focus, rather than the color of elements in the frame.
- *“Emphasize texture”*: Texture stands for touch and personal. More accentuated texture can be attained and hence the feel of emotion
- *“Timelessness”*: Black and white lends a certain timeless quality to the images.
- *“Amplifies the use of Negative Space”*: Negative space is easier to showcase and

highlight when shooting in black and white.

- *“Highlights Shape, Form and Pattern”*: Without the distraction of color, we see the interplay in lines and patterns. Tonal contrast becomes the key player and we can use it to highlight shapes, forms and patterns.
- *“Simple Composition”*: Since the subject is rock and form a simple composition is needed to make the statement and the drama. Black and white gives a simple composition but very dramatic.

5.3 Seeing in Black and White

In the current digital world we see world in color, shoot in color and later convert them into black and white for create black and white images. But in the past when people shoot B&W they were trained to see in B&W too. Shooting in color for B&W images always gives surprises – sometime awesome, sometimes awful. The final B&W image will be much stronger if a photographer can predict what the scene is going to look like.

In black and white images the dominance of color is eliminated and thus brings attention to the content of the image. Black and white images make one feel more homogenous when shooting in various lighting situations. And black and white can be very dramatic too, with the use of chiaroscuro. Again, by eliminating color in a

photograph viewer can focus more on the subject, texture and the quality of light. And black and white is a further departure from reality since we see in color everyday.

Let's look how to see in black and white: A photograph consists of form (visual aspects) and content (meaning). Form is comprised of shapes, lines, texture and color. In black and white images we are left with only shapes, lines and texture to play with. We need to understand "light" effectively, as light is the medium of photography: light defines shapes and lines; light creates texture; and light determines color. Since we see the world in color, we need to first understand the characteristics of light to know how it will look like in black and white. Major characteristics of light are – Hue, Saturation and luminosity. Hue tells us what the color is. Saturation is the intensity of color – low saturation is grey, no color.



Fig 24: "Peeling Flower" by Eileen Rafferty

Value or tone is the major characteristic of a black and white image. Thus we should be able to see tones in a color scene. Tones are levels of

brightness/luminosity. To get a good black and white image, we should be looking for good separation of brightness of various colors in the scene. Saturation and hue are irrelevant here. Variation in tones can be termed as "contrast".

In a color photograph color is the major component in evoking emotion. How do we evoke emotion without color in a black and white photograph? By applying the following elements effectively we can do so – Expression, Contrast, Negative space, Symbols, Repetition, Symmetry, and Long exposure for haziness.

In abstract photography, black and white will emphasize form. It will help obscure the subject matter. Lack of color adds a bit of mystery, which adds the non-real value to an abstract photograph. Again, these elements in a black and white photograph attracts eye strongly: Strong lines, texture, shapes, Face & figures, Sharp areas, Bright areas, and Areas of high contrast.

5.4 Zone System

The Zone System was formulated by Ansel Adams and Fred Archer in 1939–1940. The technique is based on the late 19th century sensitometry studies of Hurter and Driffield. The Zone System is a systematic method of precisely defining the relationship between, the way photographers visualize the subject and the final results. It is a powerful method for controlling not only exposure, but also to control the final appearance of a photographic image.

We need to keep the final image closer to the scene in terms of dynamic and tonal range. The “*dynamic range*” is a measure of how much the darkest bits in a recorded scene differ from the lightest. The “*tonal range*” is a measure of the granularity we use when real world tones are mapped onto a recording medium. In digital photography, the dynamic range is the difference between the noise floor and the full well charge capacity of the sensor. Similarly, tonal range is a function of the number of bits available to represent tones. The Digital Zone System helps to setup a workflow that creates image data having both highlight and shadow detail, and at the same time makes optimal use of the bits available for recording.

Digital techniques such as HDR has aids the photographers to capture a large dynamic range, by combining a number of images with different dynamic ranges.

The original Zone System takes the tones that appear in a black & white photographic print, and divides this into eleven discrete “*zones*”, from Zone 0 (total black) to Zone X (pure white). Only nine zones can hold information; zone 0 and zone 10 holds no detail.

Zones express relative difference in levels of density present in a photographic print, which may or may not reproduce exactly the relative levels of the original scene.

As Ansel Adams details in “*The Negative*”,

- Zone 0* – Total black in print. No useful density in the negative other than film base-plus-fog.
- Zone I* – Effective Threshold. First step above complete black-print, with slight tonality but no texture.
- Zone II* – First suggestion of texture. Deep tonalities, representing the darkest part of the image in which some slight detail is required.
- Zone III* – Average dark materials and low values showing adequate texture.
- Zone IV* – Average dark foliage, dark stone, or landscape shadow. Normal shadow value for Caucasian skin portraits in sunlight.
- Zone V* – Middle gray (18% reflectance). Clear north sky as rendered by panchromatic film, dark skin, gray stone, average weathered wood.
- Zone VI* – Average Caucasian skin value in sunlight, diffuse skylight or artificial light. Light stone, shadows on snow in sunlit landscapes, clear north sky on panchromatic film with light blue filter.
- Zone VII* – Very light skin, light gray objects; average snow with acute side lighting.
- Zone VIII* – Whites with texture and delicate values; textured snow; highlights on Caucasian skin.
- Zone IX* – White without texture approaching pure white, thus comparable to Zone I in its slight tonality without true texture. Snow in flat sunlight. With small-format negatives printed with condenser enlarger. Zone IX may print

as pure white not distinguishable from Zone X.

Zone X – Pure white of printing paper base; specular glare or light sources in the picture area.

Zone I, II & III – Low Dynamic Range

Zone IV, V & VI – Mid Dynamic Range

Zone VII, VIII & IX – High Dynamic Range

Zone II to IX – Dynamic Range

Zone III – Shadow

Zone V – Average

Zone VIII – Highlight

Zone II to VIII – Textural Range

Single Object: For the Zone System, light measurements are always done with a spot meter, preferably one with a one-degree coverage. A spot meter is essential for measuring specific portions of the scene, and then “*placing them*” in a specific zone. It is this placement, and not the meter's reading, that determines exposure. When metering a scene, start by metering off a standard 18 % grey card. This gives a reference point for Zone V.

With the Zone System, different parts of the scene will be measured and note how they differ. The spot meter reading will always report the exposure that will render that part of the scene as middle grey (Zone V). However, things need not appear as middle grey always. Therefore, based on how the subject should appear in the final print, decide what zone the object should ideally

appear in. Ansel Adams called this process “*visualization*”. After doing a visualization of the appropriate zone, subject is placed in the desired zone by modifying exposure up or down the scale to move the object from the measured to the desired zone.

For example, to place an object metered in Zone V in Zone VI, use a +1 EV exposure adjustment.

To recapitulate – the three things to know to use the Zone System to place single objects are:

- The Zone scale is a progressive series of tone values. Each value is the equivalent of one full f-stop or one EV step.
- The spot meter provides exposure readings for Zone V, giving a correct exposure for a known zone.
- By adjusting exposure the object can be placed in any Zone. On a calibrated monitor, and in the final print, the object will assume the tone value of the Zone in which it is placed.

Complex Scenes: For example a landscape scene; shadow details need to be placed in zone III and highlight details in zone VII. Here we need to do post-processing to complete this zone placement.

In film, adjusting development times works because development affect highlights more than shadows. By “*pushing*” development, Adams could move his highlights up one zone or two,

while keeping the shadows in the zone he exposed for. By “*halting*” development, the reverse is possible. Highlights can be moved down one zone or two, while shadows are much less affected. Hence the saying,

“Expose for the shadows, develop for the highlights.”

In digital, place the shadow in zone III and photograph the scene; highlight will be placed in zone V against what zone VII as visualized. By using the exposure control in Camera Raw, tonal range can be expanded the by moving the white point up two zones while at the same time keeping the black point fixed. But this does not work in all situations. Overexposure or underexposure will not work properly, as the clipped areas has absolutely no detail in the channel.

Digital sensors measure light linearly. If the RAW file has a bit depth equal to 12 bit, a maximum of $2^{12} = 4096$ different levels are possible. The linear capture of the camera's sensors means that if we try to capture a 9 EV range, corresponding to 9 zones, half of the 4096 levels (2048 levels) are devoted to Zone IX, half of the remainder (1024 levels) are devoted to Zone VIII, half of the remainder (512 levels) are devoted to the Zone VII, and so on. Zone V is represented by 128 levels, Zone III by 32 levels, and the extreme shadows in Zone I is represented by only 8 different levels.

This means to underexpose to avoid clipping the

highlights, you are running a significant risk of introducing noise and banding in the mid-tones and shadows. So, camera's histogram should be used to evaluate the light in the scene, and push exposure towards over-exposure so that the histogram moves as far as possible to the right edge (without moving so far that highlights are blown as indicated by your camera's clipping warning). Hence Michael Reichmann says,

“With digital: Expose for the highlights, process for the shadows.”

If the dynamic range of the scene exceeds the digital camera's maximum dynamic range, there is no way to record such a dynamic range with a single exposure; several exposures are needed with high dynamic range (HDR), each capturing a different dynamic range (e.g. one for the highlights and another for the shadows), and then blend them together.

In short, with the understanding of Zone system the setup the workflow as:

- *Look* at the scene and see in terms of zones.
- *Analyze* the subject. What zone the subject need to be placed in?
- *Consider* other elements. What zone should they be to best complement the subject?
- *Meter* the subject and determine what it's exposure would be at Zone V.
- *Adjust*. The meter returned Zone V. Now

adjust the exposure compensation (EV) up or down to put the metered subject in the zone chosen.

- *Consider* if the camera can capture enough range to place all objects in the zones visualized. If not, take extra frames as needed.
- *Capture* the frame according to what is found by metering and visualizing.
- *Develop* that image that was perfectly exposed according to visualization. Edit, apply corrections, presets, burn, dodge, tone mapping, blend layers, and whatever needed to make it match the visualized.

5.5 People – Black and White Photography

The following section reviews some of the early twentieth century master photographers who were working with black and white photography.

5.5.1 Ansel Adams

Ansel Adams, photographer and environmentalist, was born in San Francisco, California. The Sierra Club was vital to Adams's early success as a photographer. His first published photographs and writings appeared in the club's 1922 Bulletin, and he had his first one-man exhibition in 1928 at the club's San Francisco headquarters. In 1927 Adams met photographer Edward Weston. They became increasingly important to each other as friends and colleagues. In 1930 Adams met photographer Paul Strand, whose images had a

powerful impact on Adams and helped to move him away from the "*pictorial*" style he had favored in the 1920s. Adams began to pursue "*straight photography*," in which the clarity of the lens was emphasized, and the final print gave no appearance of being manipulated in the camera or the darkroom. Adams soon became straight photography's master articulate. The famous, but short-lived Group f/64, founded in 1932, recognized the greatness of Weston and the dynamic energy of Adams. Adams developed the famous and highly complex "*Zone System*" of controlling and relating exposure and development, enabling photographers to creatively visualize an image and produce a photograph that matched and expressed that visualization. He produced ten volumes of technical manuals on photography, which are the most influential books ever written on the subject.



Fig 25: *Rose and Driftwood* by Ansel Adams

As John Swarkowski states in the introduction to Adams's *Classic Images* (1985),

"The love that Americans poured out for the work and person of Ansel

Adams during his old age, and that they have continued to express with undiminished enthusiasm since his death, is an extraordinary phenomenon, perhaps even unparalleled in our country's response to a visual artist"



Fig 26: *Aspens, Northern New Mexico* by Ansel Adams

5.5.2 Elliott Erwitt

An American documentary photographer, Elliott Erwitt was born in Paris in 1928 to Russian parents, he developed an interest in photography early in his teens and worked in a commercial darkroom, before experimenting with photography at Los Angeles City College.

Erwitt traveled in France and Italy in 1949 with his Rolleiflex camera. While in New York, Erwitt met Edward Steichen, Robert Capa and Roy Stryker, the former head of the Farm Security Administration. Elliott Erwitt is famous for his

wry sense of humor when looking at the world— as well as his straightforward and nonsensical philosophies about photography. In an interview Erwitt talks about his style:

"...well, I'm not a serious photographer like most of my colleagues. That is to say, I'm serious about not being serious..."

Erwitt has shot some of the most iconic photos in history— from the times of segregation, famous actors/actresses, as well as the best dog photos.

5.5.3 Irving Penn

Irving Penn was one of the twentieth century's great photographers, known for his arresting images and masterful printmaking. Penn attended the Philadelphia Museum School of Industrial Arts from 1934–38 and studied with Alexey Brodovitch in his Design Laboratory.

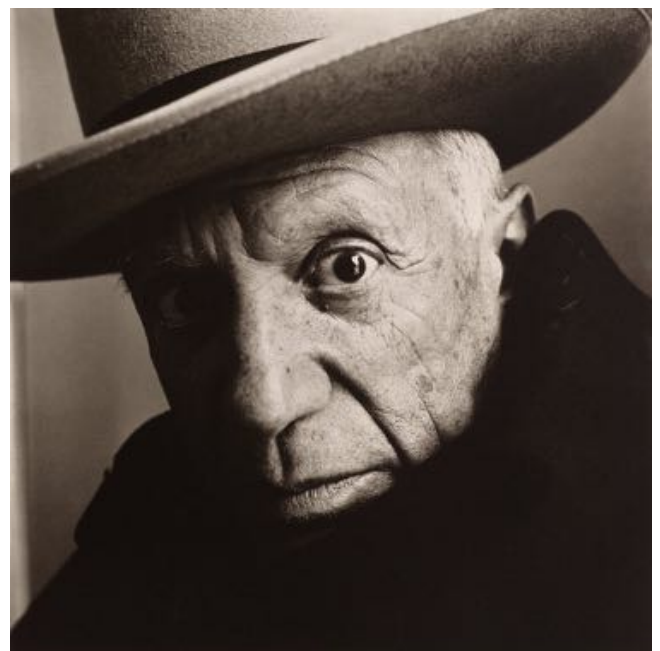


Fig 29: *Picasso* by Irving Penn



Fig 27: Paris by Elliott Erwitt



Fig 28: Pittsburgh, Pennsylvania 1950 by Elliott Erwitt



Fig 30: *Nude No. 18* by Irving Penn

Brodovitch taught the application of principles of modern art and design through exposure to magazines, exhibitions, architecture, and photography. After the Second World War, Penn quickly developed a reputation for his striking style in still life and portraiture.

He started photographing fleshy nudes at close range in the studio and experimenting with their printing to “*break through the slickness of the image.*” His innovative portraits, still life, fashion, and beauty photographs continued to appear regularly in *Vogue*.

5.5.4 Sally Mann

An American photographer, widely known for her large-format, black-and-white photographs. She is famous for “*Immediate Family*”, consists of 65 black-and-white photographs of her three children, all under the age of 10. These photographs talk mainly on the themes - on

darker themes such as insecurity, loneliness, injury, sexuality and death.

In the 1990s, Mann began photographing landscapes on wet plate collodion 8x10 inch glass negatives, and used the same 100 year-old 8x10 format bellows view camera that she had used for all the previous bodies of work. The collection is named “*Still Time*”.

5.5.5 Hiroshi Sugimoto

Hiroshi Sugimoto, a Japanese photographer and architect, uses an old-style, large-format camera, exploring his idea of photography as a method for preserving and modeling time. He was influenced by Surrealism and Dada; Sugimoto's work is intimately connected to Marcel Duchamp. He says,

“Endeavors in art are...mere approximations, efforts to render visible unseen realms...”

His work “*Conceptual Forms (2004)*” consists of large-scale black-and-white photographs of mathematical models and tools. His famous works include dioramas, theaters, Buddhist sculptures, and seascapes. Seascape series comprises of near-abstractions with long exposures.

Sugimoto talks about his Seascapes,

“Water and air. So very commonplaces are these substances, they hardly attract attention and yet they vouchsafe our very existence. The beginnings of life are shrouded in



Fig 31: Night Blooming Cereus by Sally Mann



Fig 32: Candy Cigarette Edwyn by Sally Mann



Fig 33: Dini's Surface 2004 by Hiroshi Sugimoto



Fig 34: Seascape by Hiroshi Sugimoto

myth: Let there water and air. Living phenomena spontaneously generated from water and air in the presence of light, though that could just as easily suggest random coincidence as a Deity. Let's just say that here happened to be a planet with water and air in our solar system, and moreover at precisely the right distance from the sun for the temperatures required to coax forth life. Mystery of mysteries, water and air are right there before us in the sea. Every time I view the sea, I feel a calming sense of security, as if visiting my ancestral home; I embark on a voyage of seeing."

5.5.6 Michael Kenna

Michael Kenna is an English photographer best known for his unusual black & white landscapes. His photographs feature heavenly light achieved by photographing at dawn or at night with long exposures. Since 1980's he mainly uses Hasselblad medium format and Holga cameras and thus the square format photographs. His photographs showcase the aesthetic, emotional, and spiritual resonance of natural and urban landscapes. Emphasized atmosphere, tonality, and form are the major characteristics of his works.



Fig 35: Hilltop Trees, Hokkaido, Japan by Michael Kenna



Fig 36: Ratcliffe Power Station, England by Michael Kenna

6. PROJECT EXECUTION

This section talks about the shooting experience and the processes involved in capturing the images in RAW format.

6.1 APPROACH #1: *One-Man Protestors*

The first proposed project for thesis was to study portraiture photography and the context selected was one-man protestors of Kerala. The project was envisioned in two stages – (1) Identify the subjects based on certain criteria which are originally defined as one man or woman single handedly protesting against a social cause, not personal and the protest should not involve any support from NGOs, political parties or cultural sects, (2) execution based on a preconceived visual language emphasizing the subjects to best of their relevance in the society.



6.1.1 Execution

First two months were spent to identify any person meeting the original criteria, throughout length and breadth of Kerala. Later the project

was started from north Kerala, first planned for a meet and greet only, but it seemed to be difficult to get the subjects. An initial round of portraiture shoot was completed, documenting the discussions in videos.

6.1.2 Review #1

The project was initiated after witnessing a protest by Jazeera, an ordinary house woman from Kannur, who was protesting against illegal sand mining in her village representing the people living in her colony, but nobody was supporting her except her daughters aged from ten to two. Without proper background study of the first subject, the subject definition was formulated and which caused a huge delay in finding any more people of interest. Visiting many newspaper bureaus all end in disappointments. The same reason caused changes during the course of project in seeing the people selected taking support from other people or involved in political movements. Also, not enough time was spent on studying the subjects that ended in haphazard shooting styles.



6.1.3 Review #2

Though literature review was conducted, it was not continued to create a visual language for the project. A predefined visual language for the portraiture project was essential as it resulted in varied frames and compositions during the shoot. For example, the subjects were met and photographed at their residence or working environment. To emphasize the subjects protest area, shooting should have been conducted in an environment somewhat related to their protests. Also a lack of common visual language was evident through out the project.

Learning's are – (1) after selecting the subjects a thorough back ground should be conducted, connect three main parameters – the subjects character, cause of protest and an apt environment for the shoot (2) sketch a few preliminary compositions depicting the ideas (3) define the visual language for the project based on the points 1 and 2.

6.1.4 Project closure

After four months of execution it was quite clear that redefining the subject requirements and meeting the photographed subjects again for reshoot is difficult the project was closed in the middle. This project will be taken up with proper initiation in future, fixing the mistakes listed above.

6.2 APPROACH #2: *Rock Art Of Andhra Pradesh And Telangana*

Rock Art or rock paintings on vast rock landscapes are quite large in number in the states of Andhra Pradesh and Telangana. Rock Arts found in these states aged back to 3500 BC. Project was aimed at capturing the vast rock landscapes and Rock Art at the same time. So the chosen genres were Landscape photography and documentation photography. How to accomplish a proper mix of these two was planned.

6.2.1 Execution

Ketavaram, Katavani Kunta, Yaganti, Chintakunta, and Dapalle were identified as the sites for the project. The first set of photographs was taken purely based on Landscape photography. The rock formations are very vast which spreads of kilometers of area. The second schedule of shoot included documenting the rock arts from these sites. These photographs resembled those documentations of archeology. Next task was to identify a method to mix these two, which was difficult as the rock arts were mostly less than a foot and connecting these genres through a narrative seemed to lack the essence of what was originally intended.

6.2.2 Review #1

Since mixed media was not included in the project, mixing the two genres of photography should have been avoided. A linear narrative of



Gandikota, Kadapa District, Andhra Pradesh



A view from the top of Moula Ali Dargah

opening the locations through landscape photographs and slowly narrowing down to the rock art would have been appropriate. But it has been found that this lacks the essence of the pre-historic. A better approach should have been formulated before the shoot.



6.2.3 Review #2

Project photography was toggling between Landscape and Documentation and this ended up in photographs not lined up with any of these. A peculiar type should have been formulated prior to the shoot with a common visual language among all the photographs for the project. A methodology of following basic compositional guidelines should have been exercised to keep the photographs result in a style common across the platform.

6.2.4 Project Closure

Project was closed without continuation due to the above reasons. A detailed study of the Rock Art needs to be conducted and find an element or object to represent the essence of the pre-historic in a Documentary style.

6.3 APPROACH #3: *Rockscapes Of Hyderabad*

Hyderabad is famous for the abundance of spectacular rock formations and it is quite unlikely for even a traveller to obscure the ubiquitous rockscapes of the city. To study the forms in the Rock Formations of Hyderabad and depict them photographically through abstraction as well as giving the viewer the hint of the environment are aimed at in this project. Form, Shape and Texture are the prominent compositional elements studied in this photography project.

A list of the heritage sites has been made as the first thing. The first stop was the rock formations near “Wipro Circle”, in Financial District. Upon reaching the site, to the utmost astonishment, high fencing surrounds the vast landscape and the land belongs to Emmar Group. The security personnel, despite of numerous pleadings, and the officials stated no permission can be granted to photograph the private property.

Another day, the explorations started at the top of Moula Ali Dargah. Exploring the golden light in the early morning, hours were spent there seeing and studying the rock structures. The first session was closed with varied frames and compositions to understand the rock forms. Rock landscapes, singling rock structures, proportioning balance with multiple rock objects, silhouettes, man and rocks, textures, texts etc. were tried out.

Before the first review meeting on deciding the road map for the project, decisions had to be made on the following: Aspect Ratio, Color or Black and White, Compositional styles.

6.3.1 Aspect Ratio

The aspect ratio of an image describes the proportional relationship between its width and its height. Since this project is about the rock forms and concentricity or highlighting the subject is needed, 1x1 square format has been chosen. As a shape square offers following qualities – Stable and confident, less visually interesting, rigid, conventional, direct and straightforward, oppositional, and being straight edged it forms a contrast with circle or curves (natural shapes or lines).

In a good composition square format adds to:

- Square is perfectly balanced shape, hence it encourages the viewer to move around within the frame, not side to side
- Square composition reduces clutter and make it simple
- Geometric shapes get prominence
- Subject can be centered

Square format can be used for the following principles of composition:

- Balance – symmetrical
- Space
- Simplicity
- Shape
- Central subject

Square images can be used in diptychs and

trptychs more effectively. The overall effect feels very linear, regular, predictable, solid, definitive, and grounded – like a precisely rhythmic march.

6.3.2 Black and White Image

To make the decision a list of requirements has been made:

- Concentrate on the relationship between subject and the background. Express more on the forms, texture and contrast in the image.
- Focus on light and the relationship with the subject (and the shadows that form) as well as other complementary elements.
- Emphasize texture for the feel of touch and personal. More accentuated texture can feel the emotion.
- A timeless quality to the images is needed.
- Elegant negative space is needed to supplement the subject and its characters.
- Highlight shape, form and pattern: Tonal contrast should be deployed to highlight shapes, forms and patterns.
- Simple Composition or minimalistic approach is needed to make the statement and the drama.

The equation works out to be Black and White photograph. A Black and White photograph has the timelessness quality employing light to accentuate shapes, forms and texture.

6.3.3 Compositional Styles:

As part of the initial shoot various compositional styles has been tried:

(1) “*Frame Fit*” – Filling the whole frame, right to the edges, with the subject. Most of the rocks resemble perfect spheres and gives emphasis to the shape, texture with a balanced and conventional feel.

(2) “*Asymmetrical Balance*” – A second subject has been introduced (a rock or human figure or something else) to use the steelyard balance principle. The human figure is more attentive in any photograph and emphasizes the human life around these rockscapes.



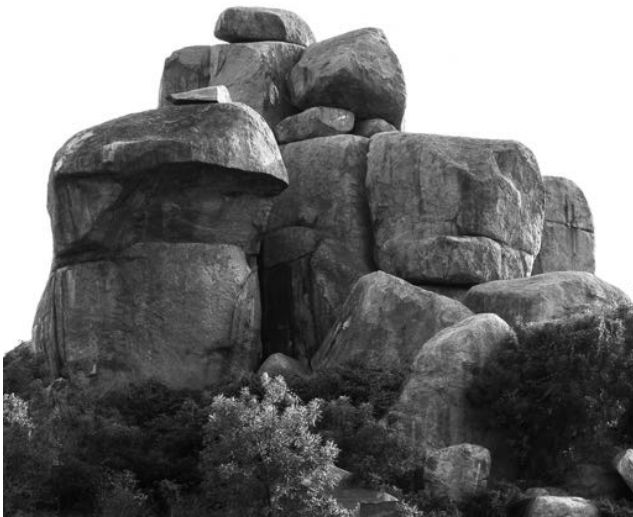
(3) “*Text in frame*” – Text is also a high attentive element. This shows the effect of human life around this environment.



(4) “*Negative space*” – primary objective of trying this style is to experiment of viewer’s emotions. The subject will be placed to the lower quarter of the image reaches the viewer in his calm mood.



(5) “*Composite shapes*” – the intention was to emphasize the rockscape and the grandeur of the structures.



(6) “*Silhouette*” – Silhouette is a low-key image emphasizing the shape.

(7) “*Animal shapes*” – it was quite surprising that some of the rock structures resemble animals.



(8) “*Large Sky*” – this is similar to using negative space, but mostly with textured sky.



Guide recommended using a single or maximum two styles to make the series more effective.

Some of the points from the review:

- (1) Avoid clusters in the background to emphasize the subject.
- (2) Avoid clutter by changing the frame and vantage point.
- (3) Avoid man-made elements from the image when talking about the serene beauty of the natural grandeur.
- (4) Go abstracting to emphasize the shape and texture of the rocks.
- (5) Introduce rhythm and harmony in the images to present a feast to the viewer.

Following this explorations were continued at the rock formations at Hitech City, “Rock Park” near Malaka Cheruvu, Khajaguda, and Gowlidoddy.



The next set was focusing on abstracting the shape, texture and pattern.

6.3.4 Review

The first review was conducted with the guide and the following feedbacks were noted for the next iteration.

Image #1: This image was captured to showcase the coexistence and contradiction between the nature's creation and the man-made. Two medium-sized rocks with text placed on a rocky plane are set against a huge backdrop of buildings that forms a homogenous pattern.

- (1) Low contrast – a nice play of layers could have been done here.



- (2) Avoid the obstructing buildings in the background.
- (3) Emphasis should be on the rocks and a subtle relationship should be maintained between the natural beauty and the man-made structures.
- (4) The foreground texture is attention seeking which should be reduced.
- (5) Get in closer to the rocks with a low vantage point to emphasize the godliness of the natural forms and reduce the background to a proportionate minimum and elevate the subject matter.

Image #2: To establish a balance between man and the nature, this image has been photographed with a balance in shapes. Also the animal resemblance of the rock forms added interest too.



- (1) Interesting contradiction and juxtaposition of shapes. Steelyard principle could have been applied with a little texture in the negative space in the form of clouds.
- (2) A different vantage point should be used to fix the proportion.
- (3) Background buildings are disturbing.
- (4) The animal resemblance of the rocks should be explored with different perspectives.
- (5) Contrast is less and unwanted waste materials in the foreground should be avoided.
- (6) A simplistic composition is needed here.

Image #3: This rock reminded a giant frog sitting casually on a plain rock. The subject was centered to emphasize the form and texture. With a clean and softy sky it was intended to emphasize the form of the subject.

- (1) Frog shaped rock formation, as a center subject needs more emphasis with proper



- use of negative space.
- (2) Buildings should be avoided.
- (3) Give more foreground area to establish the subject for the viewer.
- (4) To balance the texture of the rocks a nice texture in the form of clouds could have been better.

Image 4: Rocks in the beautiful nature is captured here. With an interesting drama in the skies, the rocks and trees are having a nice conversation.

- (1) Interesting drama and balance between the rocks and the trees. But the skewed plane loses the serious drama.
- (2) Also disturbing buildings in the background.
- (3) Exposure for the sky needs to be worked upon to give more details.
- (4) Again unwanted waste materials in the foreground should be avoided.

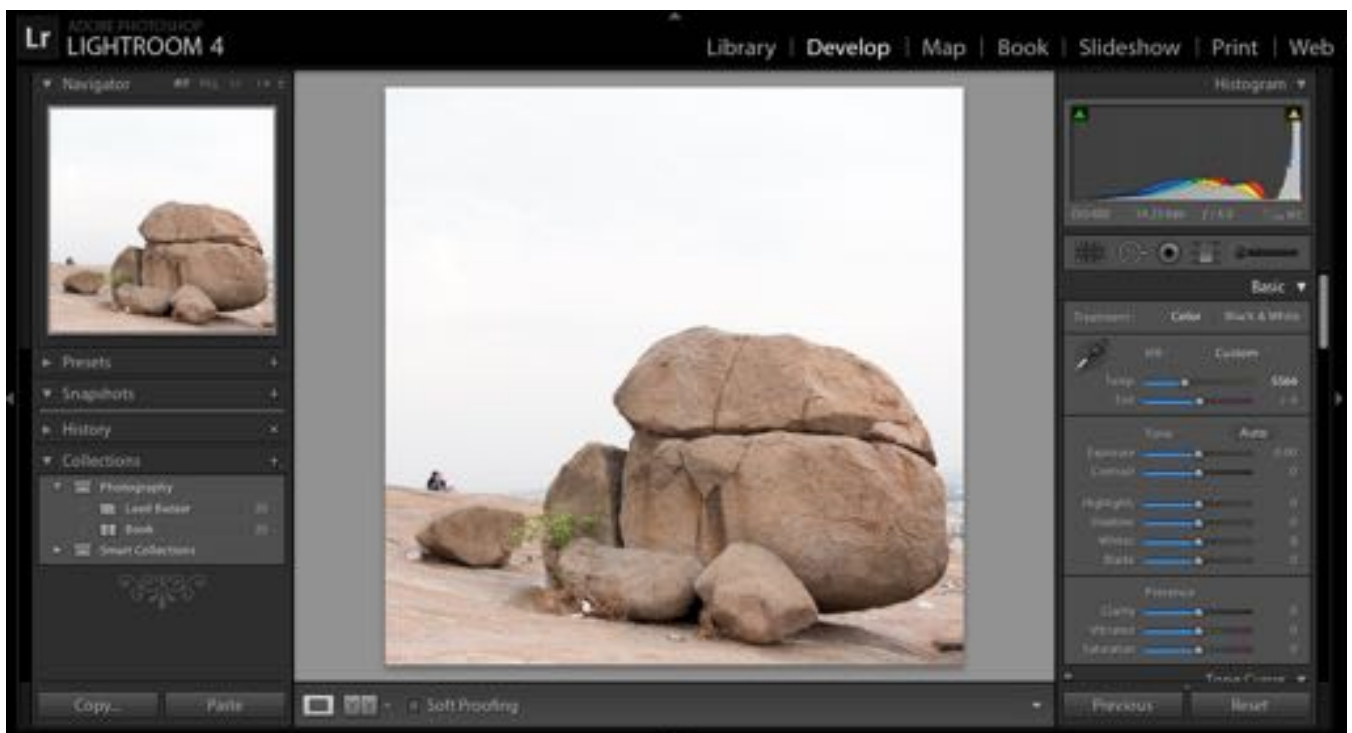
7. POST-PROCESSING

RAW format was from the camera is imported into computer and set to the correct aspect ratio. Later the image is converted to black and white, with required adjustments. This section details the processes involved.

7.1 CONVERTING RAW TO BLACK AND WHITE

In Lightroom 4

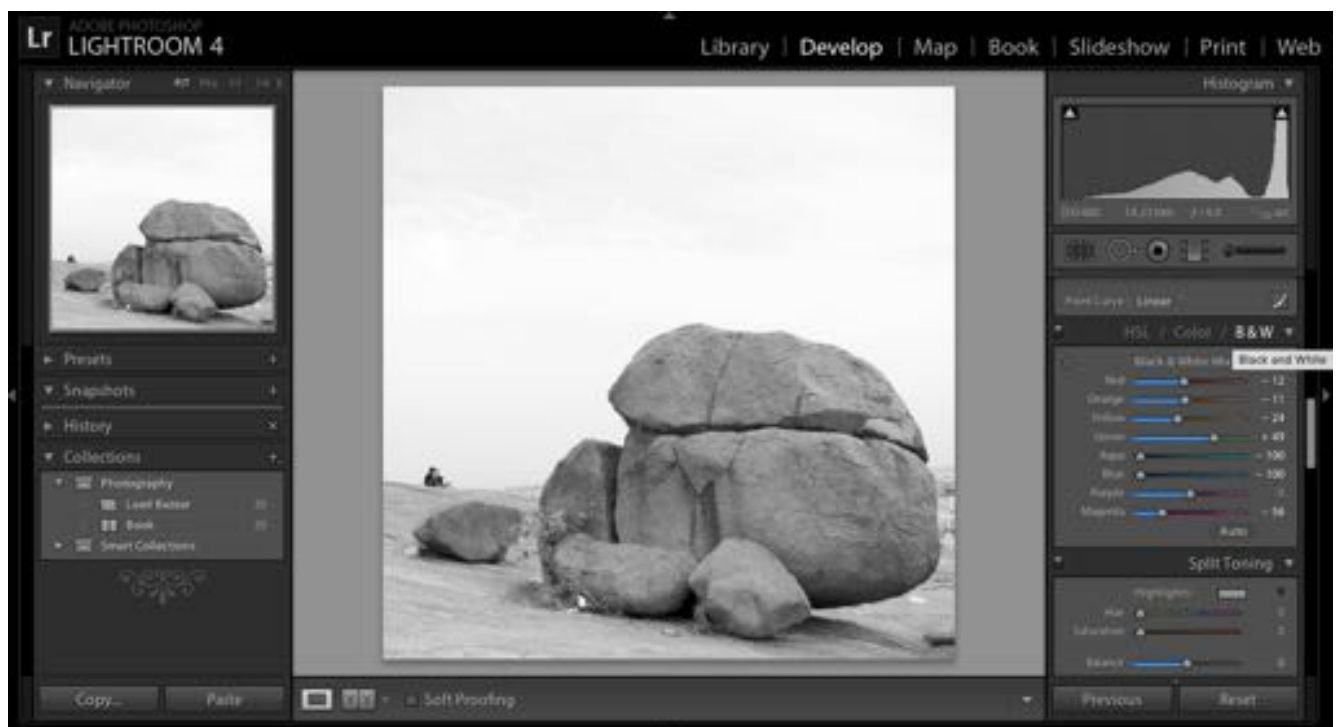
All the photographs taken are recorded in RAW format, while LCD display has been set to show in B&W with aspect ratio 1x1. Lightroom 4 has been used for converting RAW images and editing later on.



Open the image in Develop module.



Select the B&W option to convert the image into gray scale.



Adjust the B&W Mix sliders to achieve the required effect. Orange is the prominent color in the image and blue pixels in the sky area.



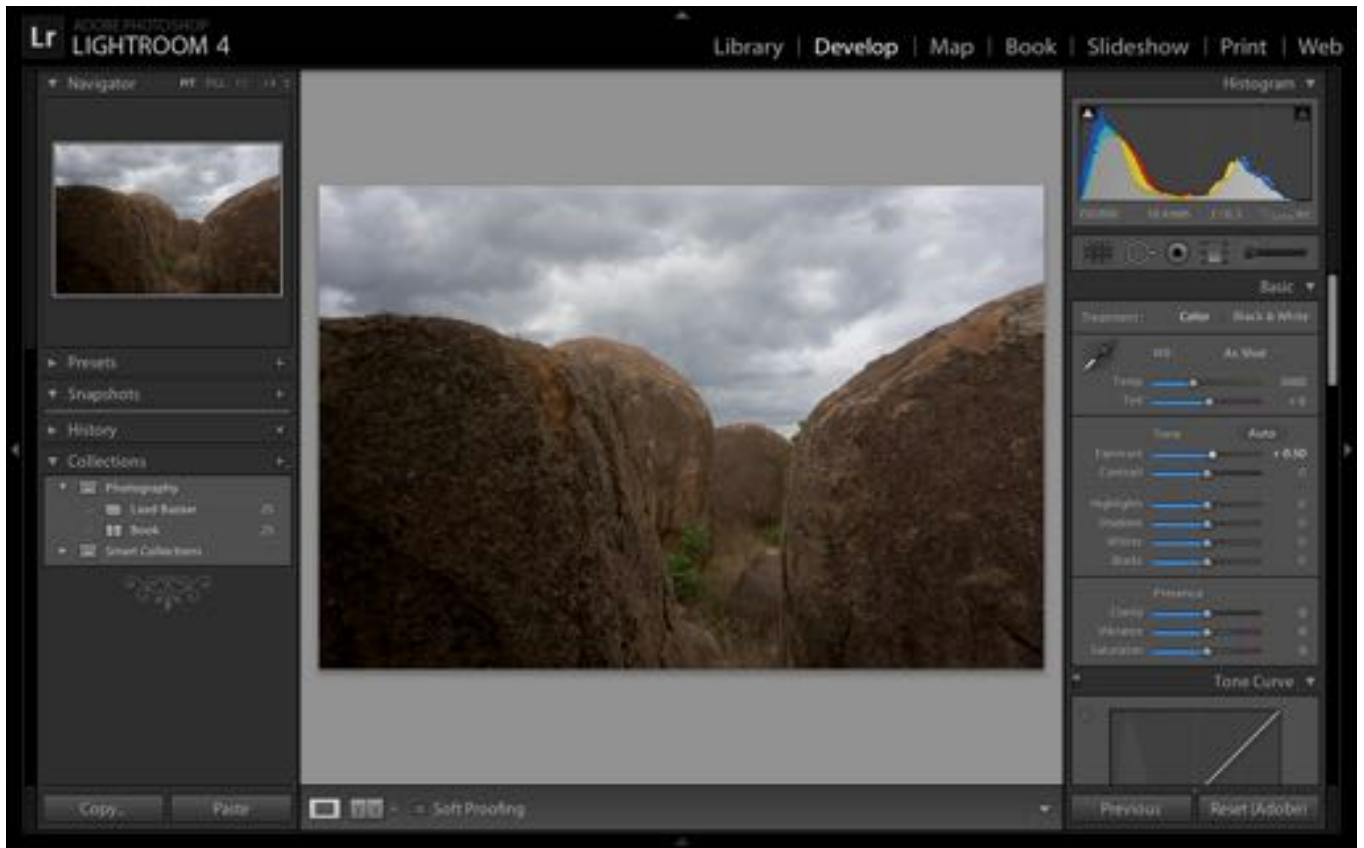
Later on the global adjustments were used to increase the contrast a bit.



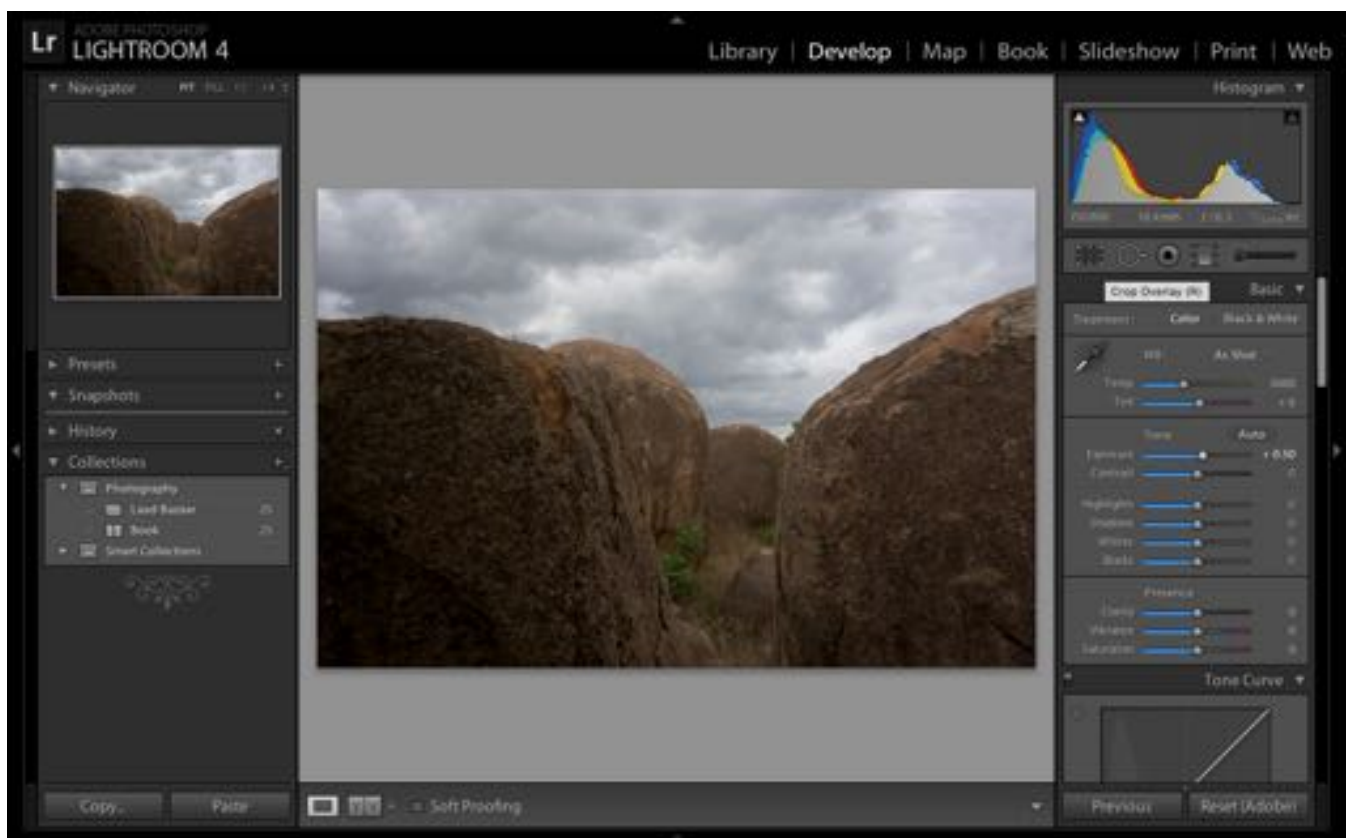
Graduated filter adjustments to local application.

Using Silver Efex Pro 2

The second option and more accurate one is to use the plugin “Silver Efex Pro 2” by Nik Collection as we have more controls on the details of highlights, midtones and shadows.



Import the image into Lightroom 4



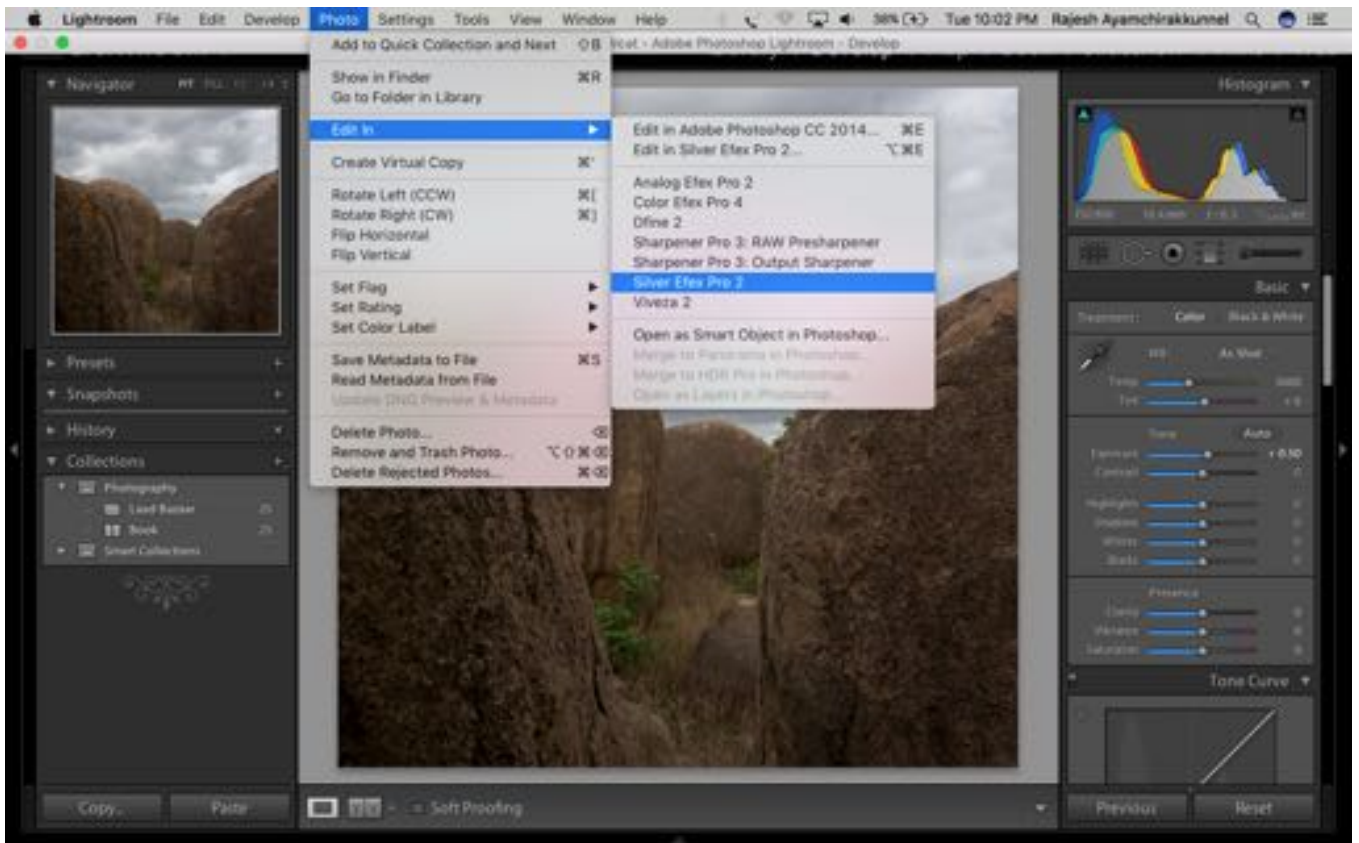
Select the crop option to convert the image into square format.



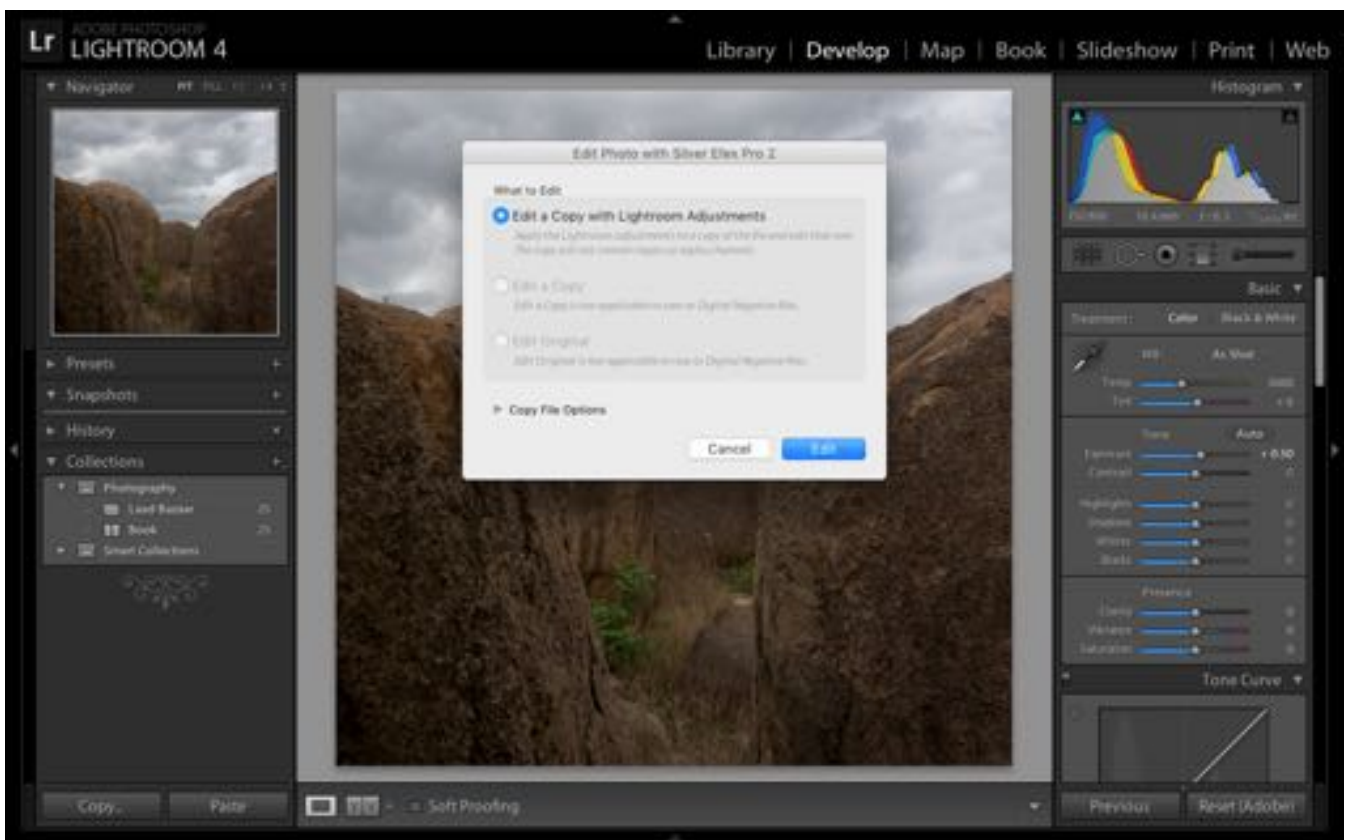
Set the Aspect Ratio to 1x1.



In the “Tools” menu the “Golden Section” grid overlay is selected. So while cropping, the grid will be visible for alignment.



Now it is time to open the image in Silver Efex Pro 2.



Confirm that we need to edit a copy of the image with Lightroom adjustments.



Silver Efex Pro 2 opens up in a new window with compare.



Global and local adjustments can be made to achieve the intended result

Make the changes as required. Here the global

adjustments buttons are seen under the heading

“*Brightness*”, “*Contrast*”, and “*Structure*”. Each of these sliders has sub sliders for “*Highlights*”, “*Midtones*” and “*Shadows*”. Along with that we have “*Dynamic Brightness*”, “*Soft Contrast*” and “*Fine Structure*” for additional refinement. There is a separate section for “*Tonality Protection*” for fine-tuning the tonal contrast globally.

For Selective adjustments, a button is given for “*Control Points*”. Click on that button and click on the image where the local adjustments need to be made. Then it will open up sliders for brightness, contrast and structure adjustments. Once the image is saved it is returned to the Lightroom and further refinement can be made there. The image is then exported as jpeg for printing.



Compare the final changes with the original image.

7.2 PRINTING

The time and effort spent on the creation of a photograph can be appreciated only if it's printed. Printing makes the photographer more aware of his every move. Having in mind that what one creates will be printed later imposes a discipline that was never before. It is physical – a print is a tangible object created.

When choosing a paper for your work, there are technical and aesthetic considerations.

7.2.1 Technical

Gamut – Print color gamut is the range of colors a printer/ink/paper combination can reproduce. Gamut affects highly saturated colors. Print Gamut is also affected by the color space of

camera, computer and printer.

Brightness – Brightness is a measurement of light reflectance of a specific wavelength of blue light. Simply put – brightness represents a more narrow measurement of light reflectance than whiteness. Some papers use optical brighteners (OBA's) to extend the paper's tonal range.

Dmax – How black is the black? It is a measure of the deepest black tone a printer/ink/paper combination can reproduce. Prints with poor Dmax look pale and weak. Glossy paper produces blacker black than matte paper.

Longevity – It describes the media's archivability and resistance to fading.

Durability – The media's ability to resist abrasion, wobbling, kinking, folding and scratching.

7.2.2 Aesthetic

- Natural paper or synthetic Resin Coated (RC)
- Reflectivity – Glossy or Matte?
- Texture – Smooth or textured?
- Weight – Thick or thin papers?
- Edges – cut or deckled?

Matte vs. Glossy

Matte papers are based on Alpha-cellulose from wood or cotton rag fibers. They have a texture like those used for painting – a look and tactile experience that is simply absent in plain photo papers. Matte papers reflect less but may pose shine in a motif too. Matte papers are printed with matte black inks to result in uniform blackening. Manufacturers such as Hahnemühle offer also glossy (Barytas) papers, which cover all tastes in high-gloss, semi-glossy or pearlescent. Glossy papers have a higher reflectivity and are printed on with Photo Black ink. This creates deeper blacks and bold colors combined with the desired degree of gloss. In short, for pictures that are subtle and touching, select matte papers.

For this project the following paper has been selected to emphasis the texture and for high tonality.

PART - IV

8. LEARNINGS

The thesis project progressed through various approaches and finally reached at an experience of abstract photography using natural forms. When the project began with portraiture, I reviewed a good number of master photographers who exemplified in portrait photography. The environmental portrait photographers were studied as well. Meeting with people who are strangers to me, while studying their environment and their area of strength showed me a new path of exploration. Later when I moved to Rock Art, pre-historic art was my area of interest. Got in touch with archeology department and other museum archives to learn about various rock art sites. The journey was quite exciting as I crossed much countryside and communicated with people using no common language. Searching for Rock art took me to a new world, where the terrain was just awestruck. Here I learned an approach of mixing documentary and landscapes styles in photography.

Coming to the third and final approach, Rockscapes of Hyderabad, I moved on to study abstraction. I realized the need for getting to know the history of photography and spent a few months for the same. People created abstracts from natural forms in two ways – hiding the original object, and the second, hinting about the original object of reference. Need to train ones eyes for seeing as camera was my primary concern. And to identify the aesthetic beauty in those views. To define beauty I got back to history and read the theories on art, especially painting. Golden section and dynamic symmetry were tried out. From a technical perspective I improved my compositional skills, understanding of zone system and how to previsualize. The importance of aspect ratio and how black and white intensifies the content would not have been learnt unless I did this project.

9. CONCLUSION

Starting with a detailed review of the history of photography, this project analyses the emphasis of forms given during various periods – mainly described as art movements. Master photographers were keen in their compositions through forms. Philosophically photography itself stands for formlessness as it depicts past. Talking or scribing forms through formlessness is only possible through photography. Simplistic compositions emphasizing just forms showcase the intense narratives giving a personal feel to the viewer. The serene beauty of Hyderabad's rocky landscape is widely appreciated but rather no efforts are taken to protect them for the years to come. Through weathering the rocks take shapes from the inner intrinsic composition of minerals. This inner soul of the rock formations is studied and photographed in this project. Evocative power of square frames and stubbornness of black and white language is explored. To complete the mission printing has been studied and felt the joy of the final results.

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