

PART 1 RECOGNIZE AND ORGANIZE SHAPES

PART 2 GEOMETRY ANALYSIS AND HIERARCHY

PART 2

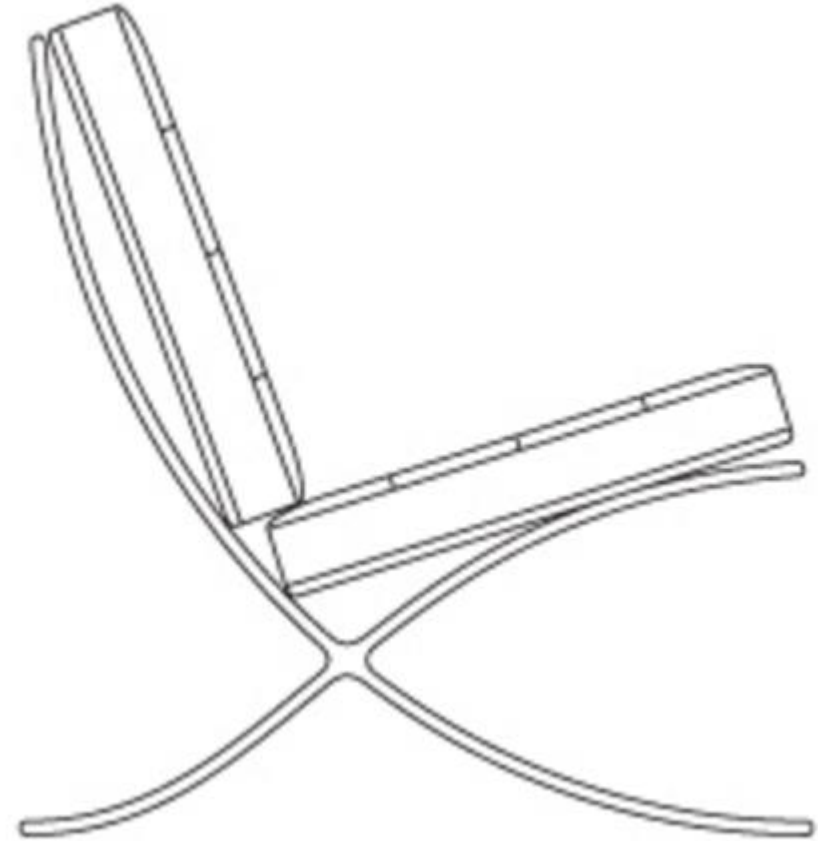
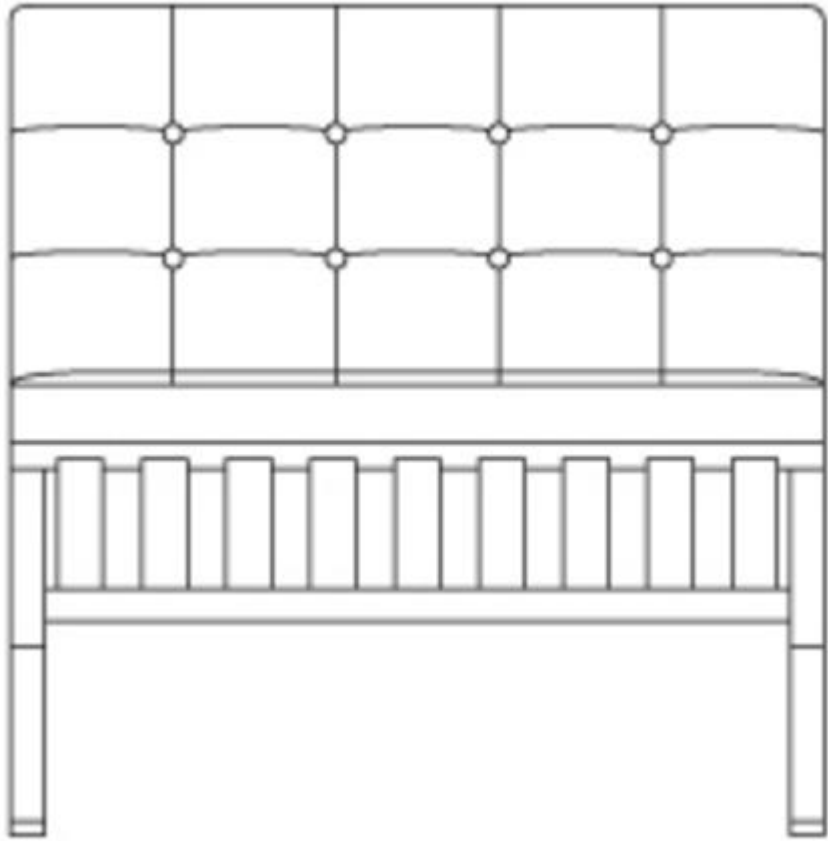
Geometry analysis and hierarchy

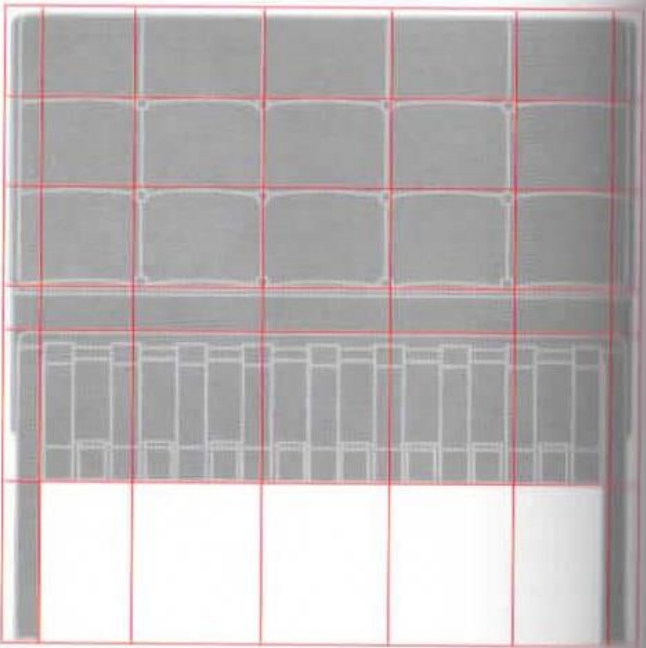
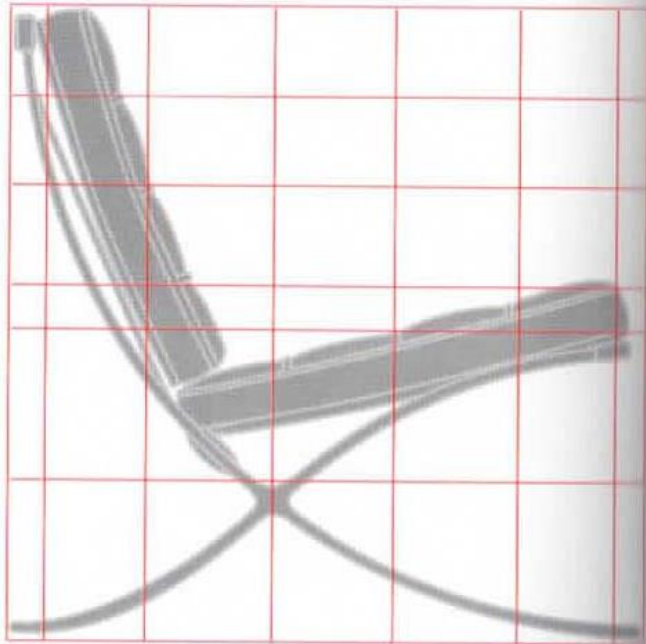


Barcelona chair, by Mies van der Rohe, 1929

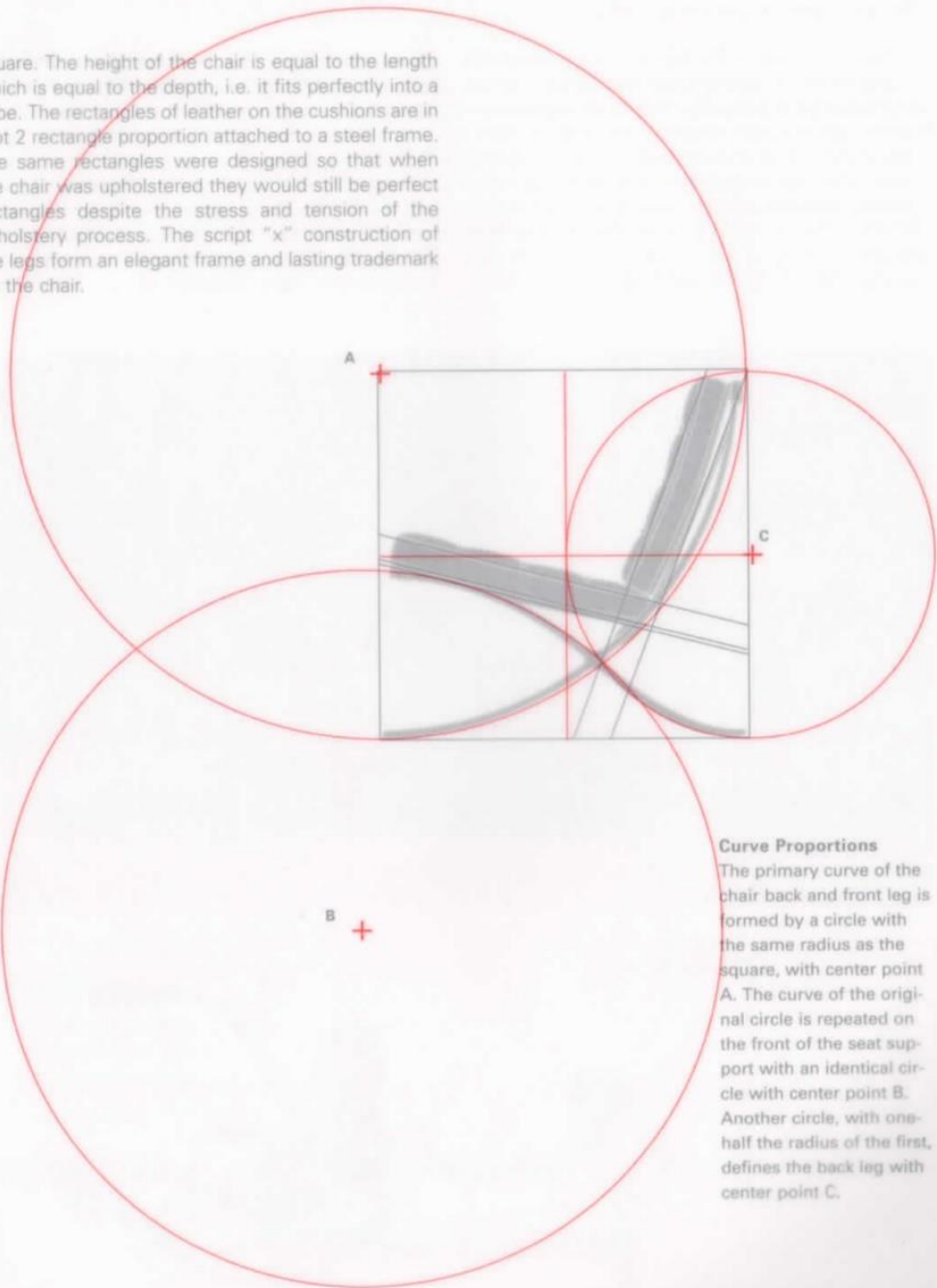
EXERCISE

Draw an elevation of the Chair. Place tracing paper over your drawing and use pencil to identify underlying geometry compositional principles, proportions and relationships.





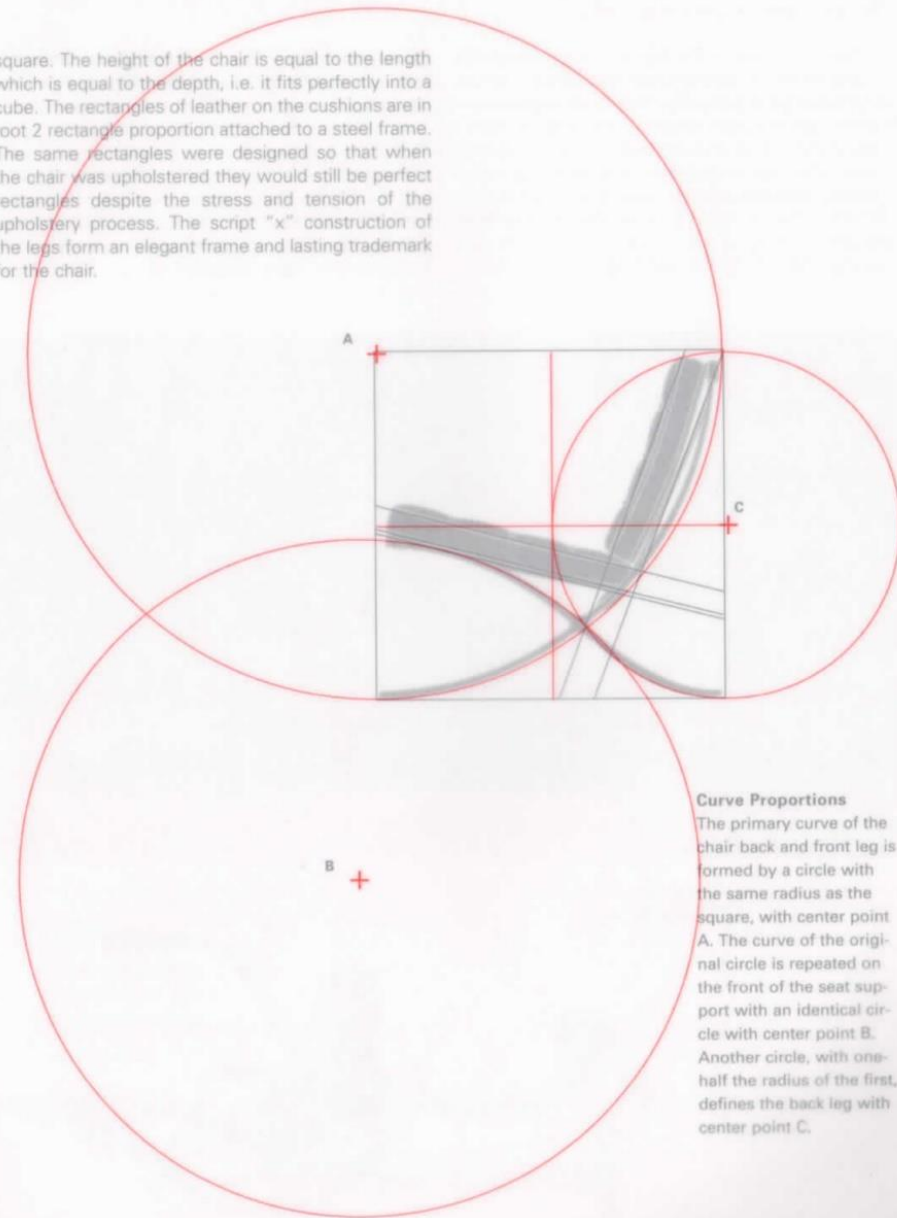
square. The height of the chair is equal to the length which is equal to the depth, i.e. it fits perfectly into a cube. The rectangles of leather on the cushions are in root 2 rectangle proportion attached to a steel frame. The same rectangles were designed so that when the chair was upholstered they would still be perfect rectangles despite the stress and tension of the upholstery process. The script "x" construction of the legs form an elegant frame and lasting trademark for the chair.



Curve Proportions

The primary curve of the chair back and front leg is formed by a circle with the same radius as the square, with center point A. The curve of the original circle is repeated on the front of the seat support with an identical circle with center point B. Another circle, with one-half the radius of the first, defines the back leg with center point C.

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How is this design generated?

Hierarchy

- How is hierarchy established?
- What geometry is dictating organization?

Geometric Relationships

- How does each geometry **relate** to the other? Is it random placement?
- Where are the **intersecting** points?
- Where are the **center** points?

Activation

- Where in the geometric composition is the design activated?

GEOMETRIC ANALYSIS PRINCIPLES

THE DIAGONAL & CENTER

LINE FROM CORNER TO CONER

PROPORTION

VISUAL RELATIONSHIPS BETWEEN LENGTH
AND WIDTH, ELEMENTS AND THE WHOLE

COMPOSITIONAL GRIDS

HORIZONTAL, VERTICAL AND DIAGONAL ANALYSIS

RABATMENT

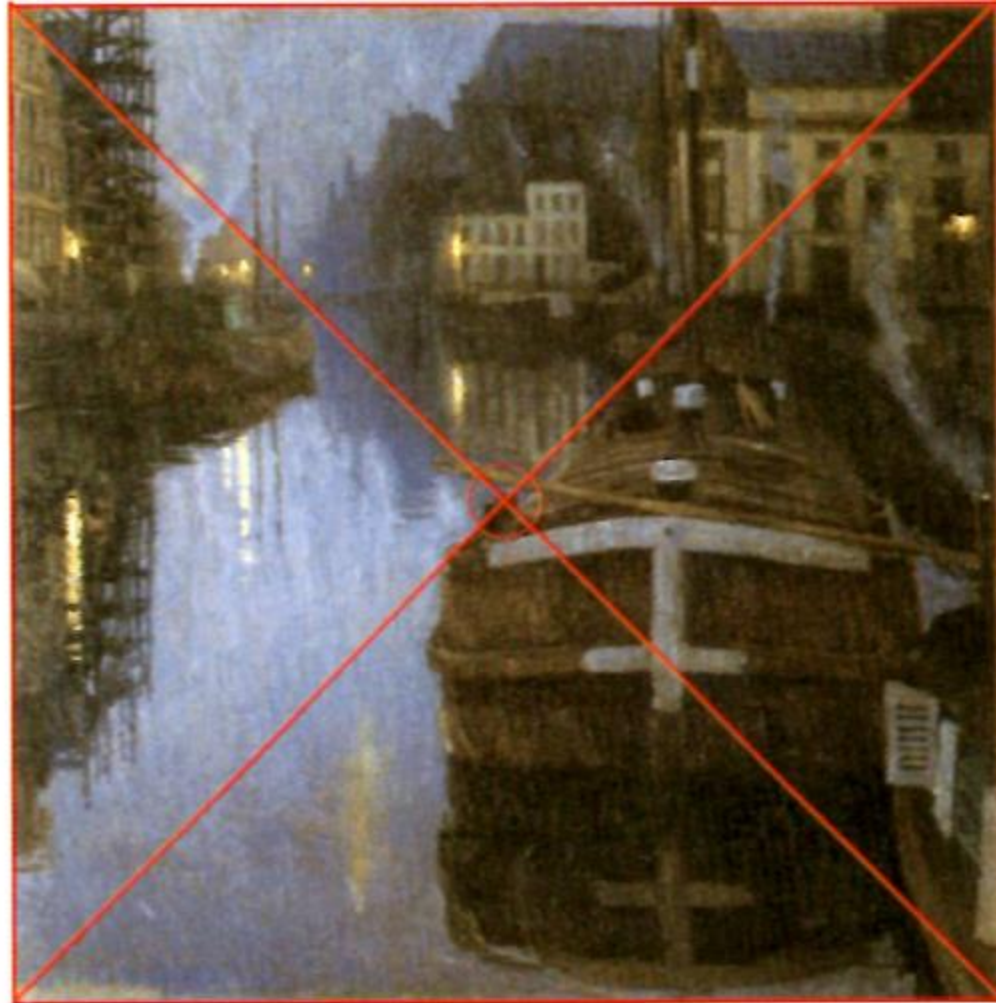
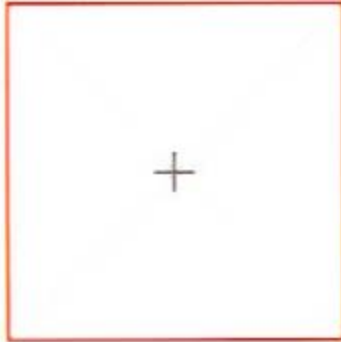
LAZY MAN'S GOLDEN SECTION

THE RULE OF THIRDS

LAZY MAN'S GOLDEN SECTION

THE DIAGONAL & CENTER

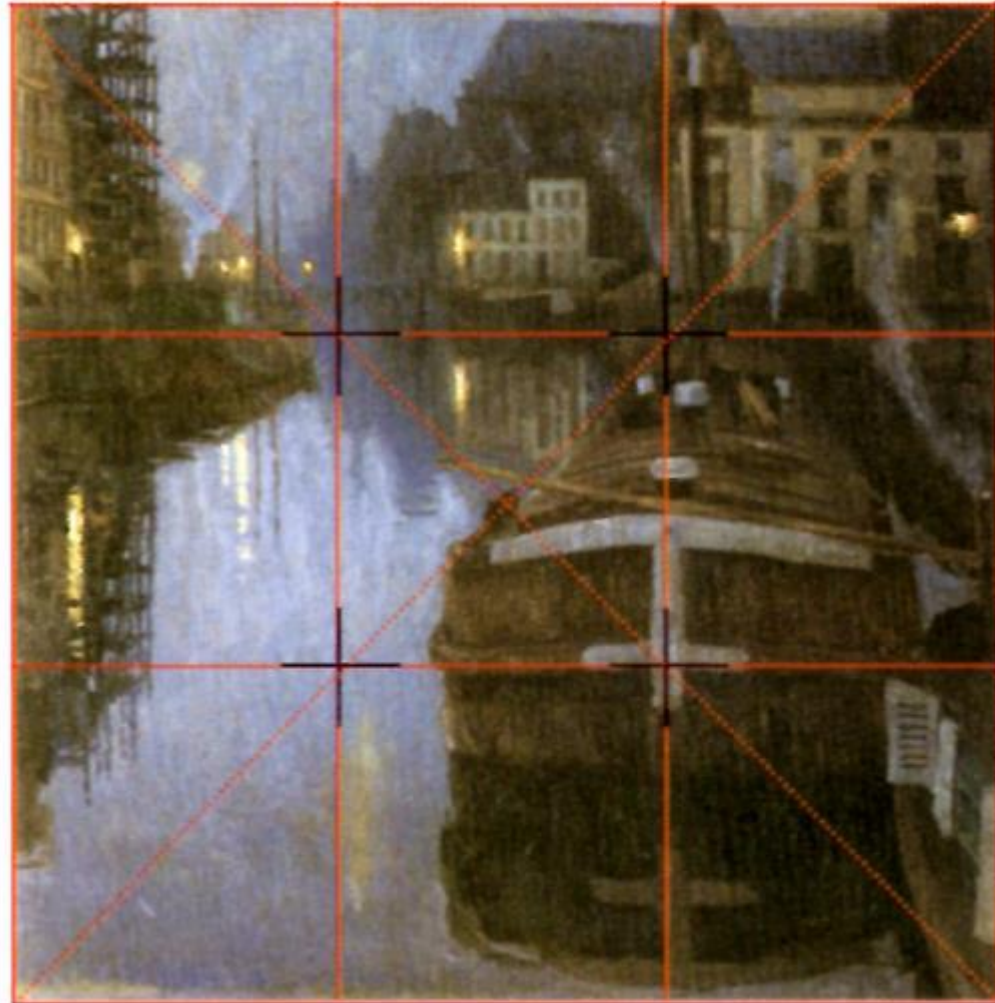
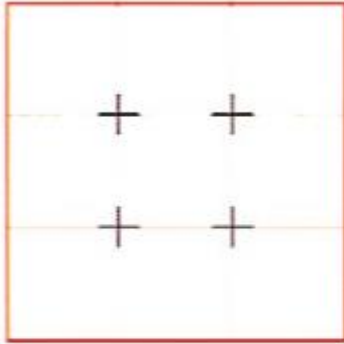
LINE FROM CORNER TO CONER



Ghent, Evening, Albert Baertsoen, 1903

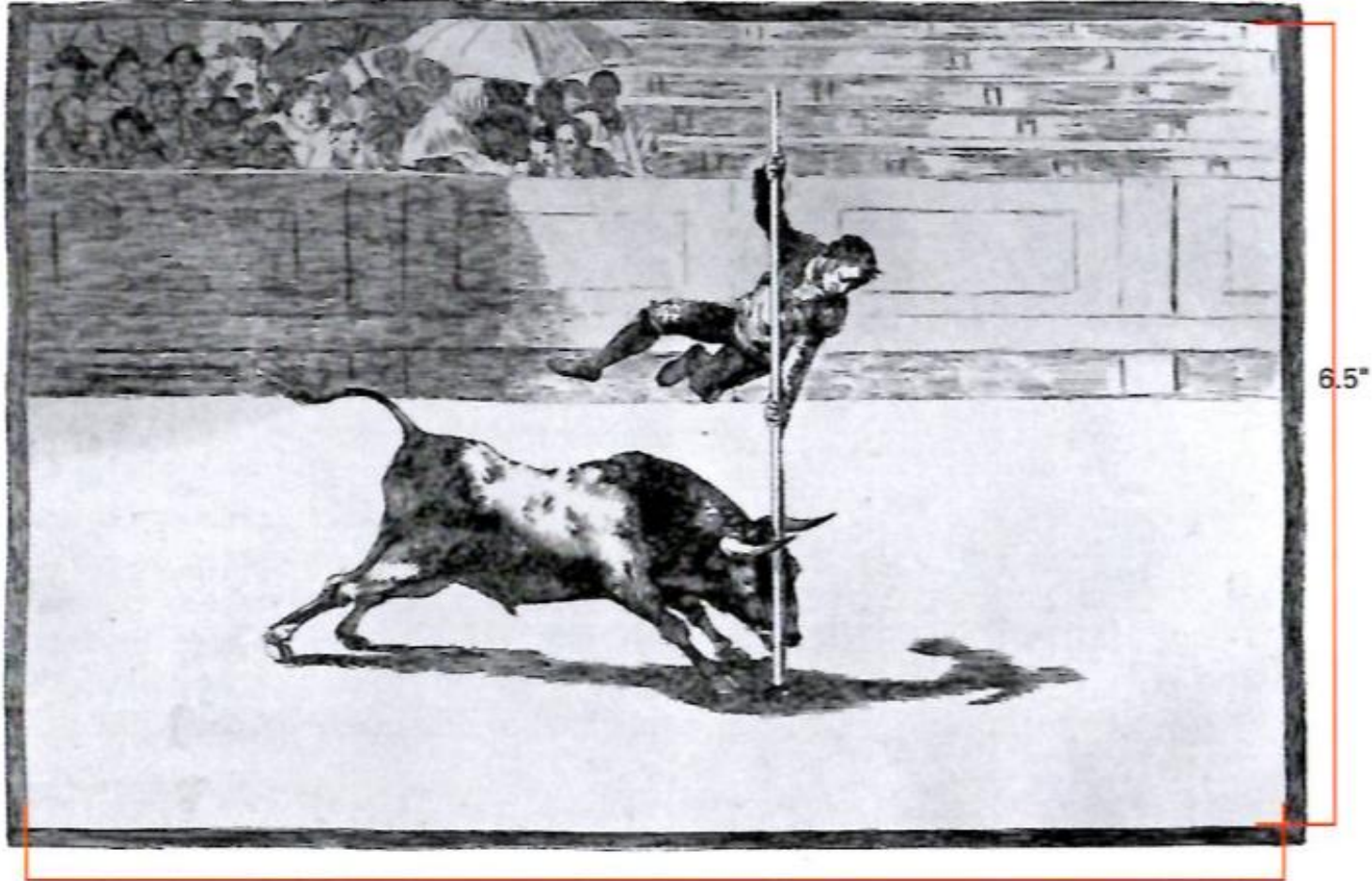
THE RULE OF THIRDS

MAGIC ODD NUMBERS, INSPIRE ASYMMETRY



PROPORTION

VISUAL RELATIONSHIPS BETWEEN LENGTH AND WIDTH, ELEMENTS AND THE WHOLE



10.6" Print Size

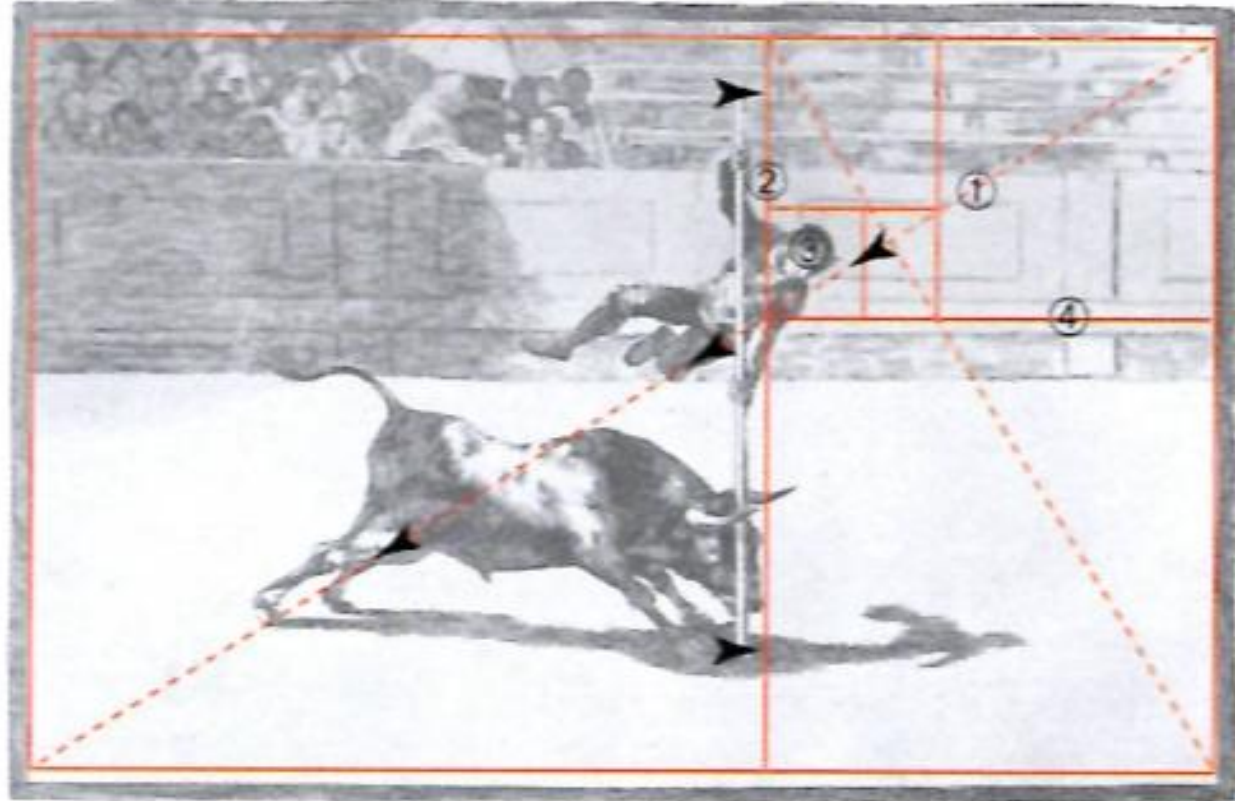
PROPORTION

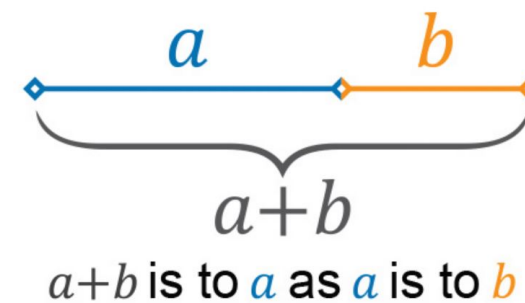
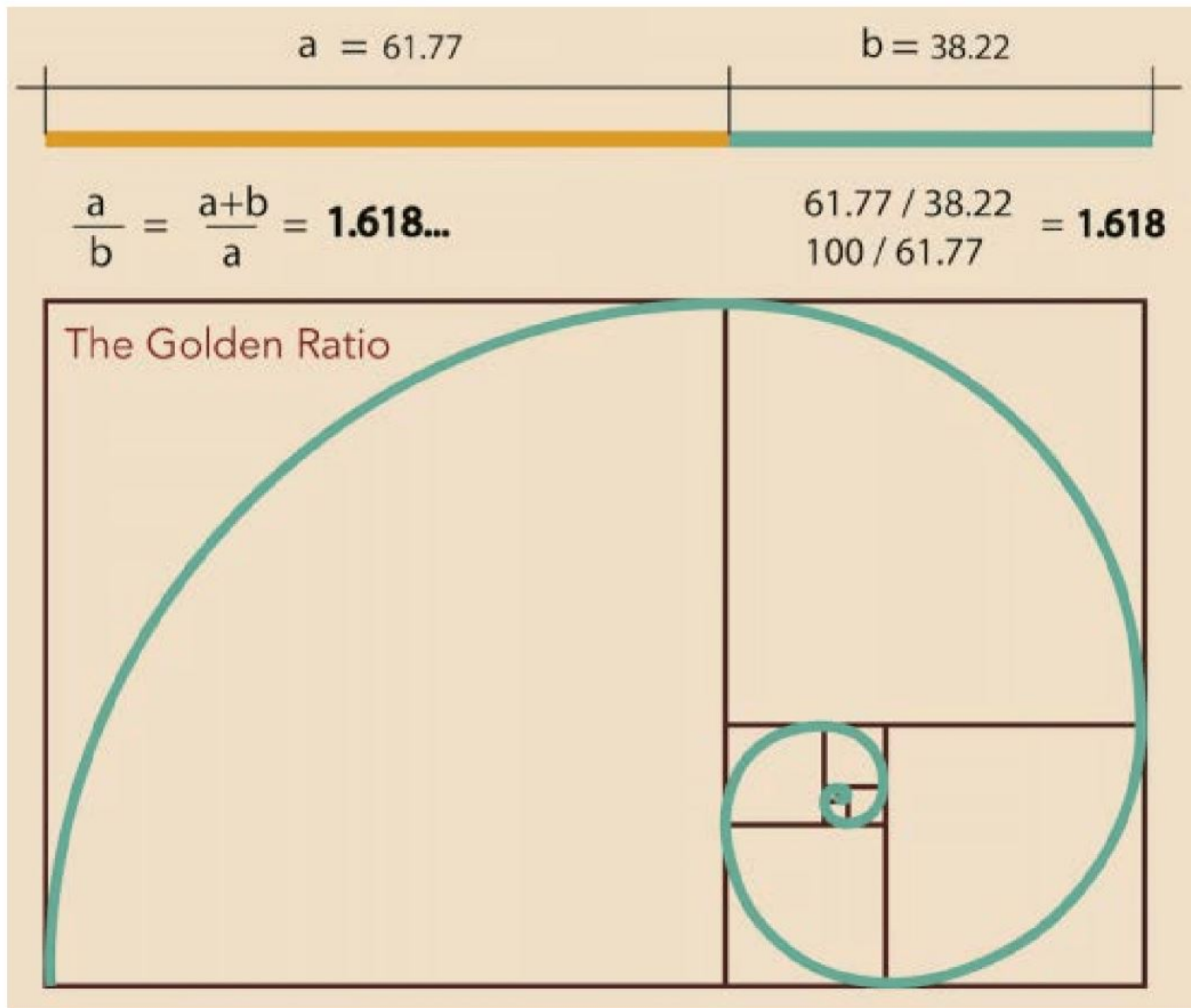
VISUAL RELATIONSHIPS BETWEEN LENGTH AND WIDTH, ELEMENTS AND THE WHOLE

Golden Section Rectangle

Since the proportion is close to golden section proportions, placement of a golden section construction diagram on top of the print confirms that this is a fairly close match. With this match observations can be made regarding the composition of the drawing:

1. The diagonal follows the angle of the toreador past the head and from the shoulder to leg through the rear legs of bull.
2. The vertical pole is to the left of the reciprocal golden section rectangle.
3. The head of the toreador is inside the smallest golden section reciprocal rectangle.
4. The top of the square of a reciprocal golden section rectangle aligns within the structure of the arena.





$$\frac{a+b}{a} = \frac{a}{b} = \varphi = 1.6180339887\dots$$

$\phi = 1.6180339887498948482$
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golden mean caliper

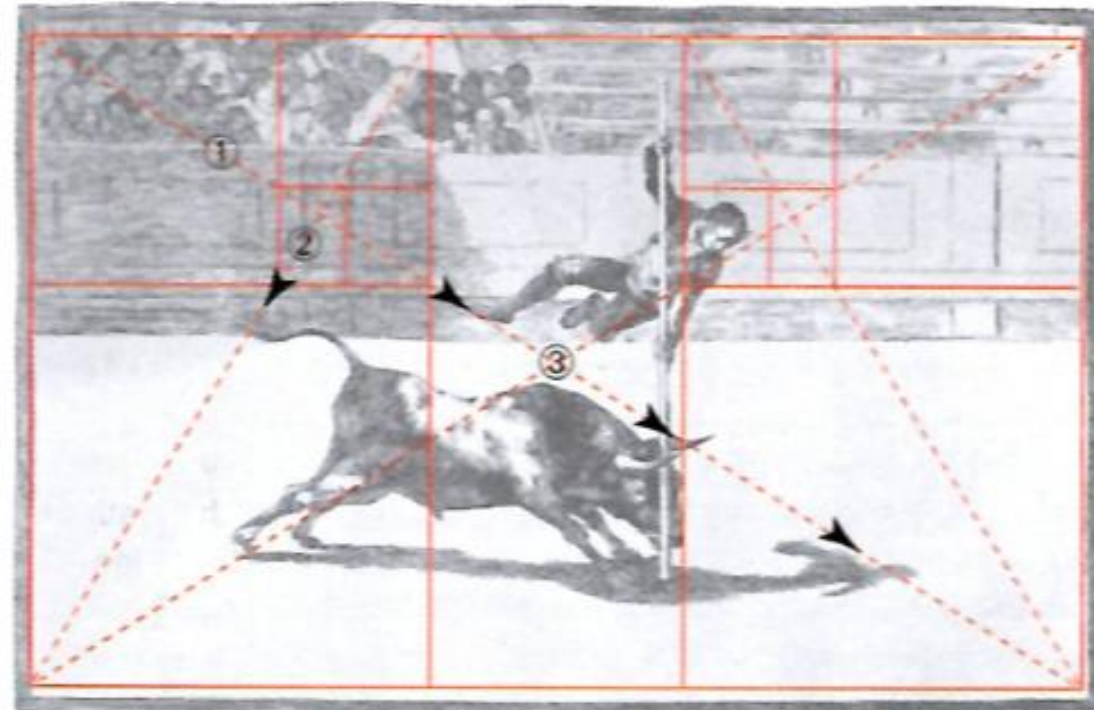
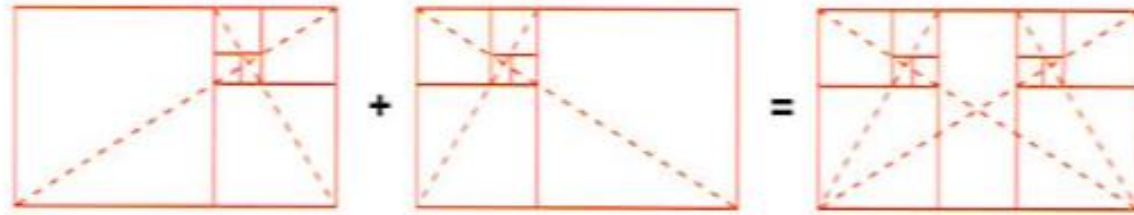
PROPORTION

VISUAL RELATIONSHIPS BETWEEN LENGTH AND WIDTH, ELEMENTS AND THE WHOLE

Reflected Golden Section Rectangle

Reflecting the golden section rectangle yields still more information about the drawing. Additional observations can then be made:

1. The reflected diagonal from upper left to lower right touches the foot of the toreador, the horns of the bull, and the shadow, as it follows the arch of the bull's neck.
2. The tail of the bull touches the diagonal of the reciprocal golden section rectangle.
3. The center of the drawing is in the air between the neck of the bull and the legs of the toreador. The horizon of the arena structure is just above the center point.

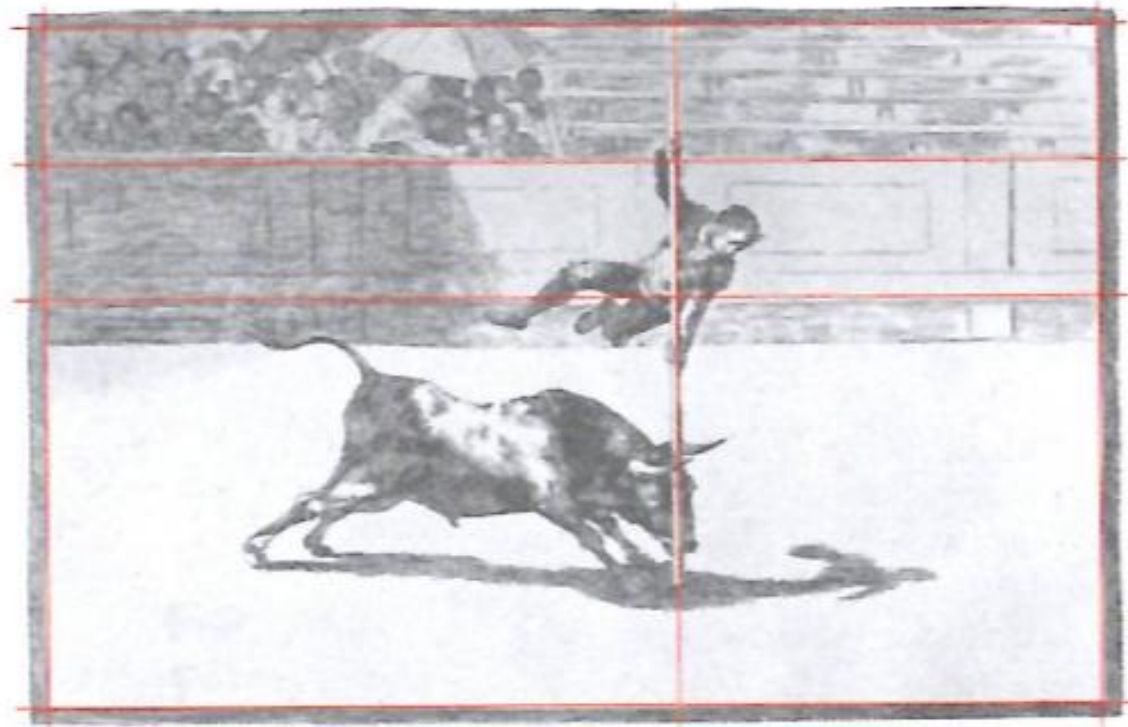


COMPOSITIONAL GRIDS

HORIZONTAL, VERTICAL AND DIAGONAL ANALYSIS

Grid Structure Beginning

When seeking a grid structure in a work of art or design, look for dominant vertical and horizontal lines as a starting point. There is one very dominant vertical in the composition, the toreador's pole. The dominant horizontal lines are in the arena structure. These three lines become the starting point for a possible grid structure.

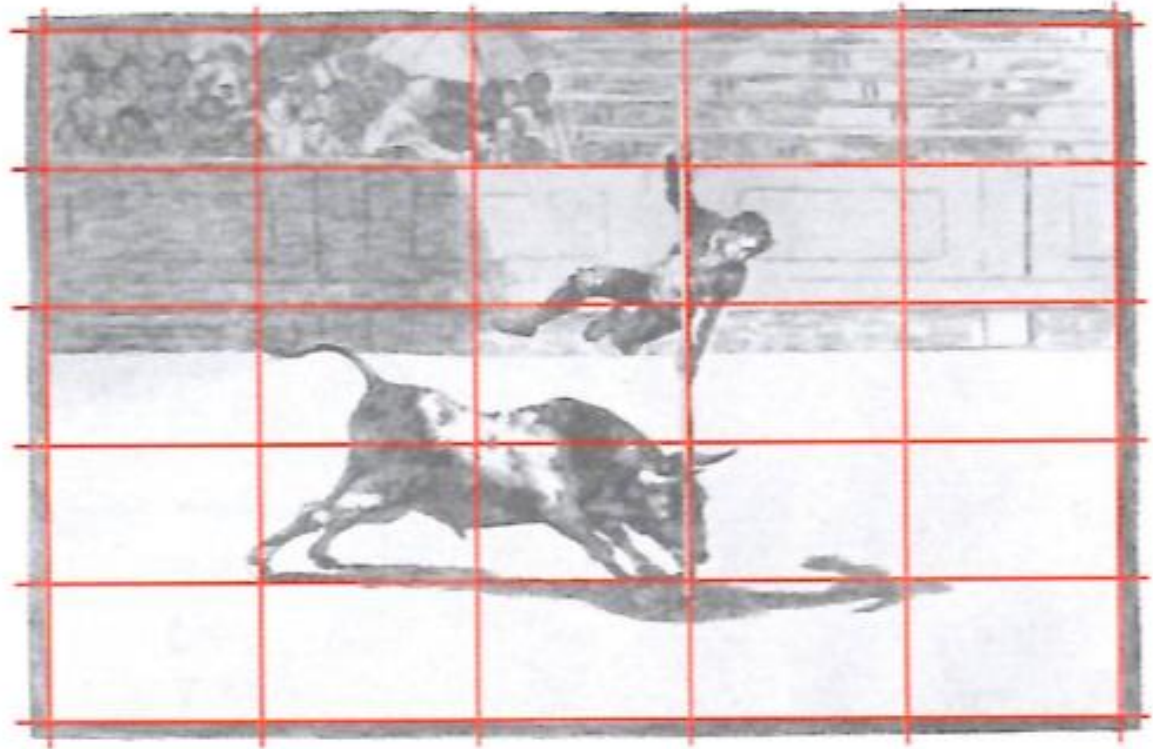


COMPOSITIONAL GRIDS

HORIZONTAL, VERTICAL AND DIAGONAL ANALYSIS

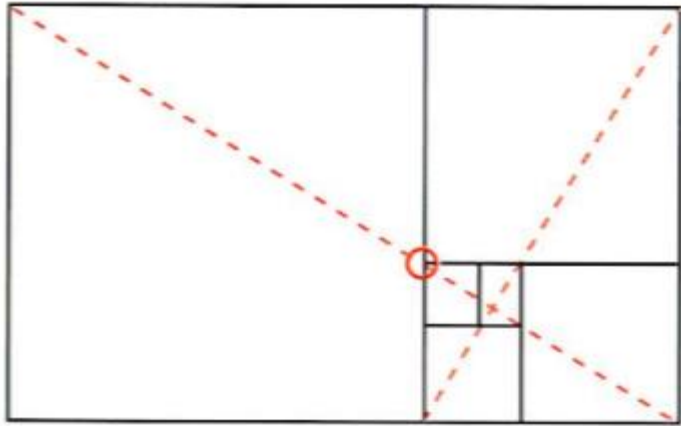
Grid Structure

By working from the potential known grid lines, shown above, the remainder of the grid structure can be developed. In this case a 5 column x 5 row grid structure fits well. The 5 x 5 structure creates asymmetry as the toreador and pole align along the second column from the right. The bull is enclosed in four visual fields and portions of the arena structure and crowd occupy the top two rows.

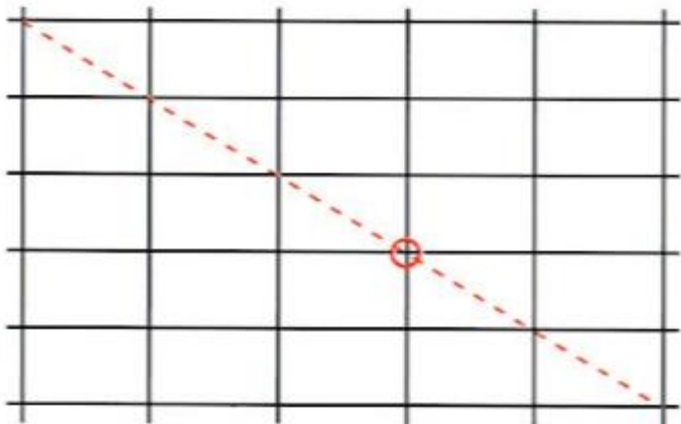


COMPOSITIONAL GRIDS

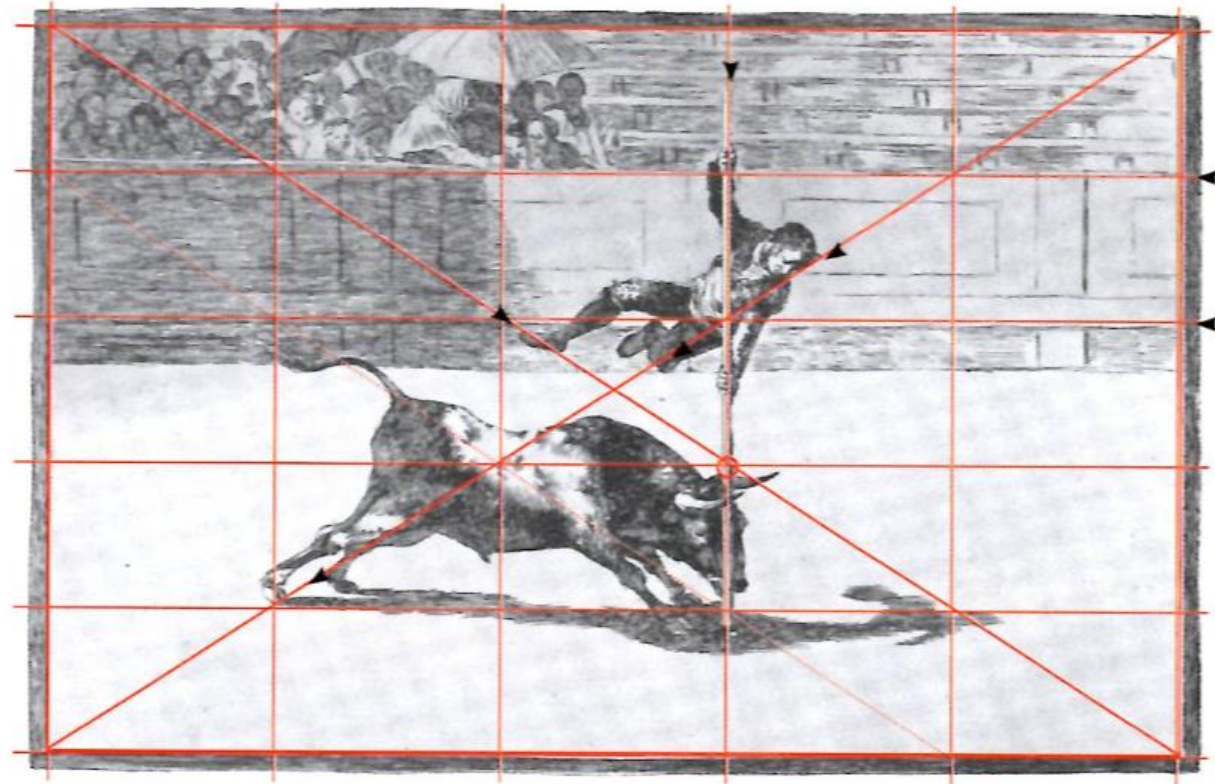
HORIZONTAL, VERTICAL AND DIAGONAL ANALYSIS



The Golden Section Point



The Golden Section Point of a Rectangle



RABATMENT

LAZY GOLDEN SECTION. RABATMENT IS A COMPOSITIONAL METHOD THAT CONSISTS OF PLACING A SQUARE, WITH A SIDE EQUAL TO THE EDGE OF THE RECTANGLE, OVER THE LEFT OR RIGHT SIDES OF THE COMPOSITION.



Racehorses at Longchamp, Edgar Degas (Hilaire-Germain-Edgar De Gas), c. 1873–75

Rabatment

The rabatment method organizes the painting. The left, red, rabatment edge splits the pair of foreground riders and the right, black, rabatment edge divides the group of seven riders. Diagonals from the rabatment squares enclose and follow the angle of the group of horses and riders at left and right. The center figure, in pink silks, is just to the right of the vertical center, with the jockey's head at the meeting of the diagonals.



Right Rabatment Edge

Left Rabatment Edge



Horizontal Format



Left Rabatment



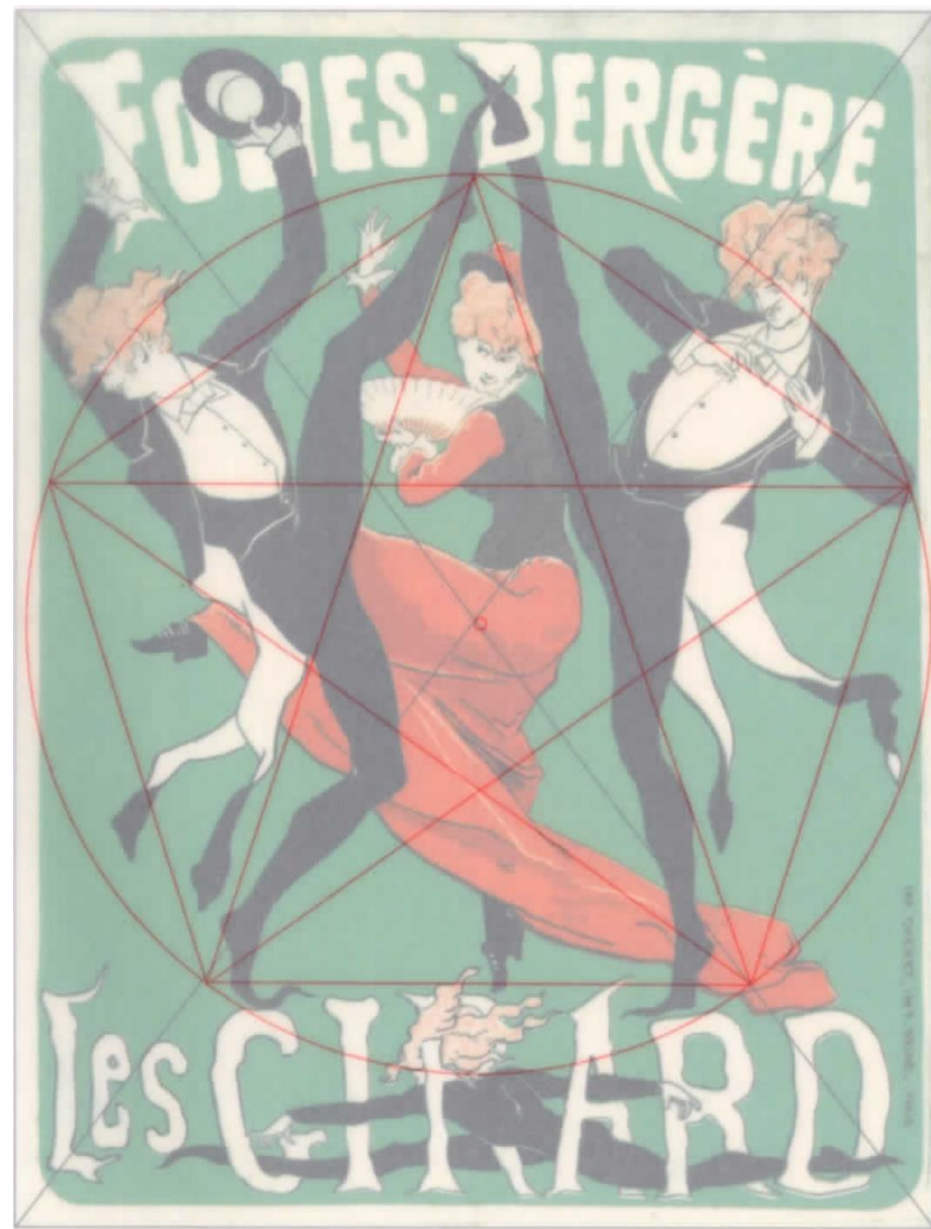
Right Rabatment



Overlapping Left and Right Rabatments

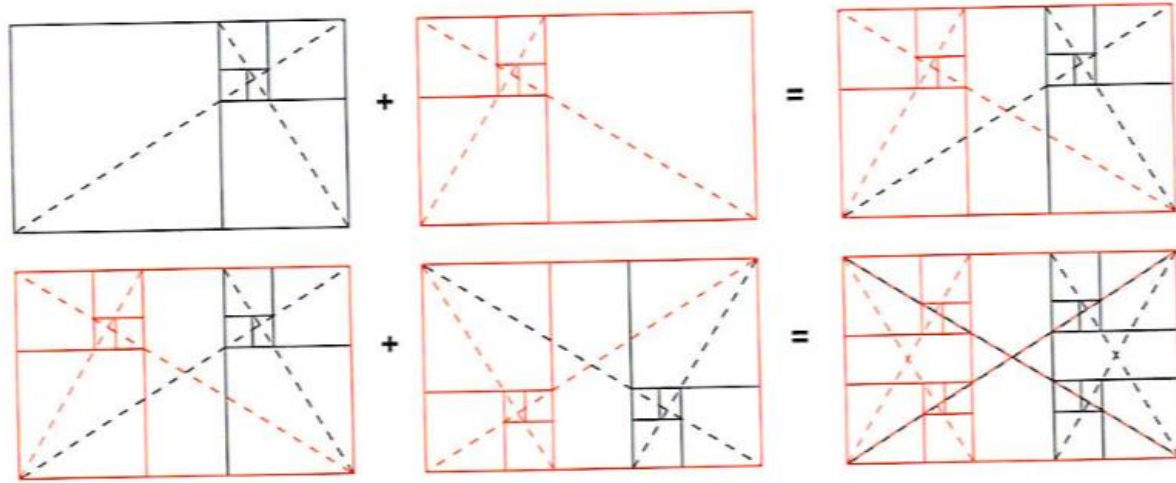


Jules Cheret | Folies-Bergere Poster, 1877





Georges-Pierre Seurat | Bathing at Asnieres, 1883

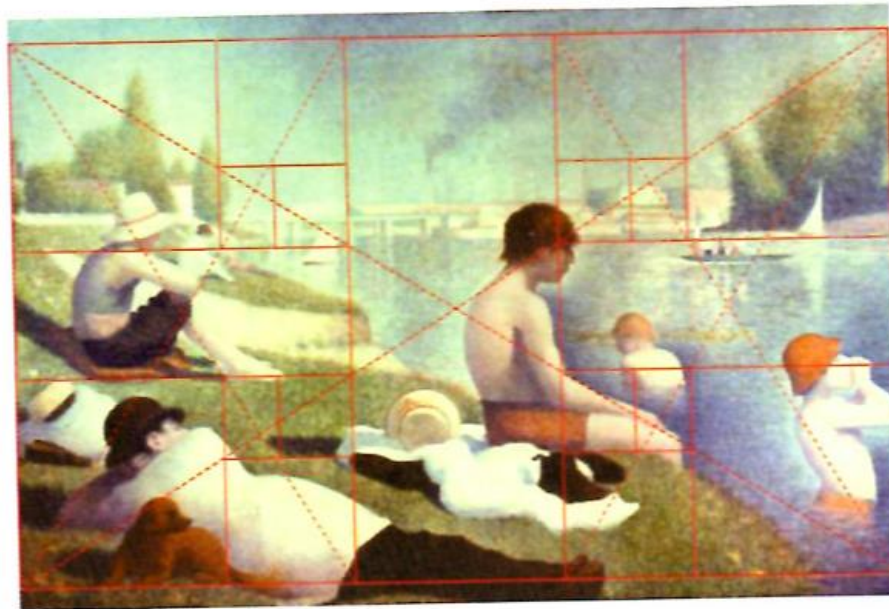


Construction of the Golden Section Dynamic Rectangle

The golden section dynamic rectangle consists of four overlapping golden section rectangles. Beginning with a single rectangle it is copied and reflected vertically, and then copied and reflected horizontally.

Golden Section Dynamic Rectangle

The golden section dynamic rectangle placed over the painting shows that the focal point, the seated figure, is placed at the square of the golden section rectangle. The horizon is at the square of the reciprocal golden section rectangle and the diagonals touch the angle of the seated figure's neck and arms, the back of the figure in the water, and both the reclining figure and seated figures in the background.

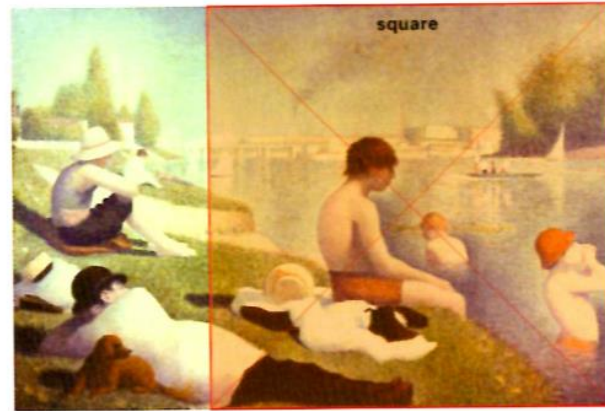


Rabatment

The *Bathing at Asnières* painting is a horizontal rectangle and the left rabatment square is shown in blue. The main seated figure is aligned at the right side of the square and the two figures in the water are placed outside the rabatment. The right rabatment square, shown in red, splits the reclining figure with the seated figures resting outside.



Left Rabatment



Right Rabatment

Rabatment and Grid

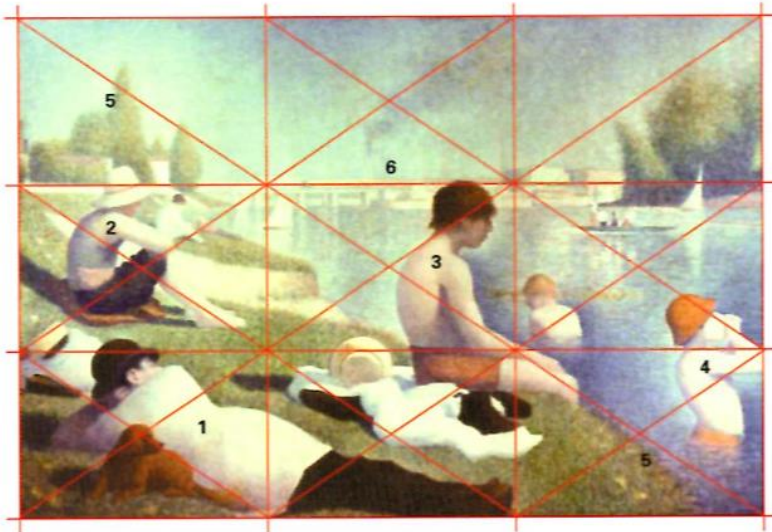
Placing both the left and right rabatment over the composition reveals that the composition is divided vertically into thirds. The addition of horizontal lines, again dividing the composition in thirds, shows a 3 x 3 grid structure. Each grid rectangle is in the same proportion as the canvas.



Left and Right Rabatment Resulting in a 3 x 3 Grid

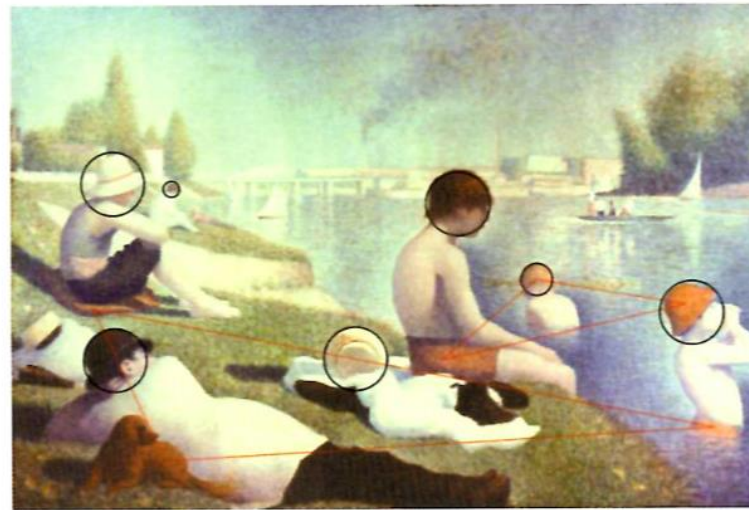
3 x 3 Diagonal Grid

Diagonals placed on the 3 x 3 grid reveal placement and direction in the composition. A number of elements in the painting correspond to the grid diagonals: 1. the reclining figure in the foreground, 2. the legs of the seated background figure, 3. the slumped neck as well as the arms and legs of the largest seated figure, 4. the arms and legs of the figure in the water, 5. the angle of the grassy land and background trees follow the diagonal, and 6. the horizon follows the horizontal of the top third of the composition.



Circles

Circles formed by the heads and hats guide the viewer's eye direction in the composition. Each of the large circles are about the same size. The head of the smaller bather in the water is enclosed by a small circle that is half the diameter of the large circle. The head of the seated figure in the far background is about half the diameter of the small circle, making all of the heads in proportion to each other. The viewer's eye rests on the circles and groups them in a series of patterns.

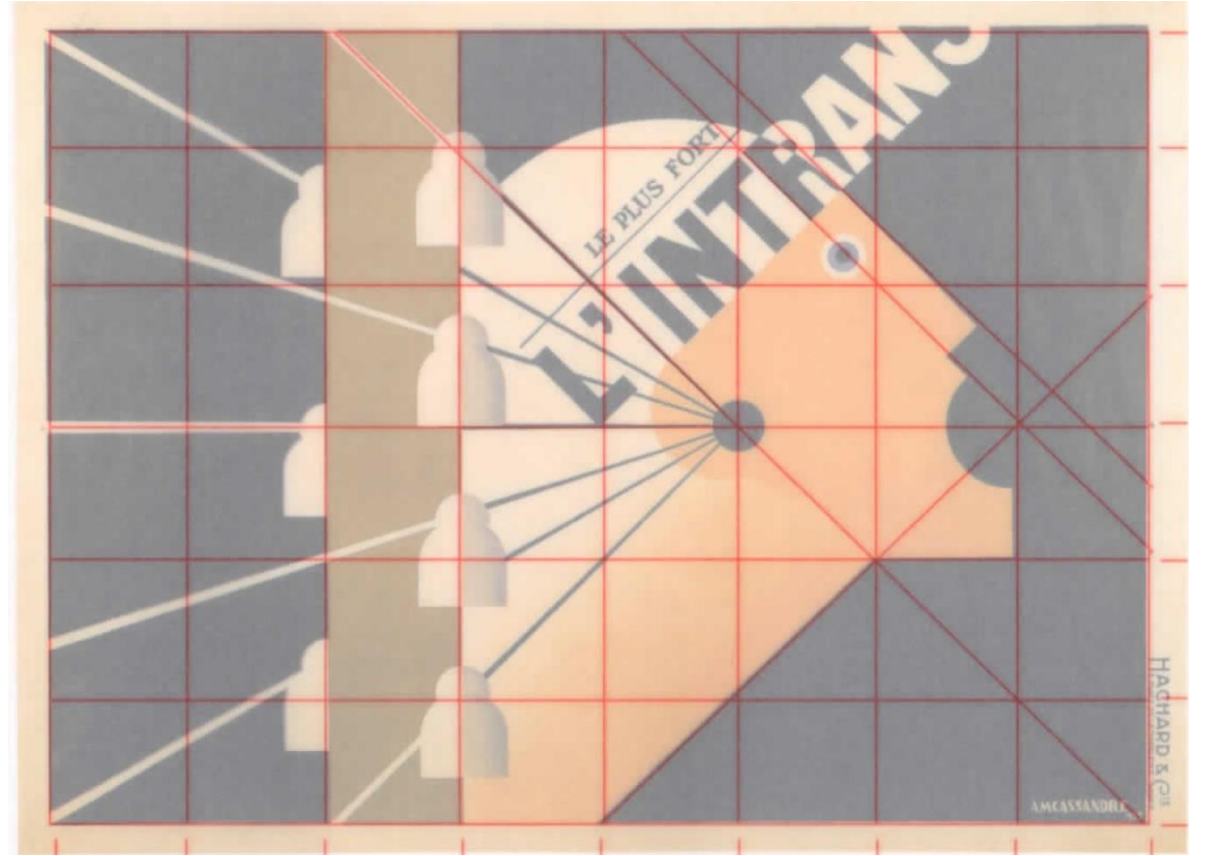


Color

The use of color also controls the viewer's eye. The rusty red is repeated in the dog, bather's trunks, hats, and cushion. The viewer makes visual connections among patches of red in a triangular manner connecting the patches of red.

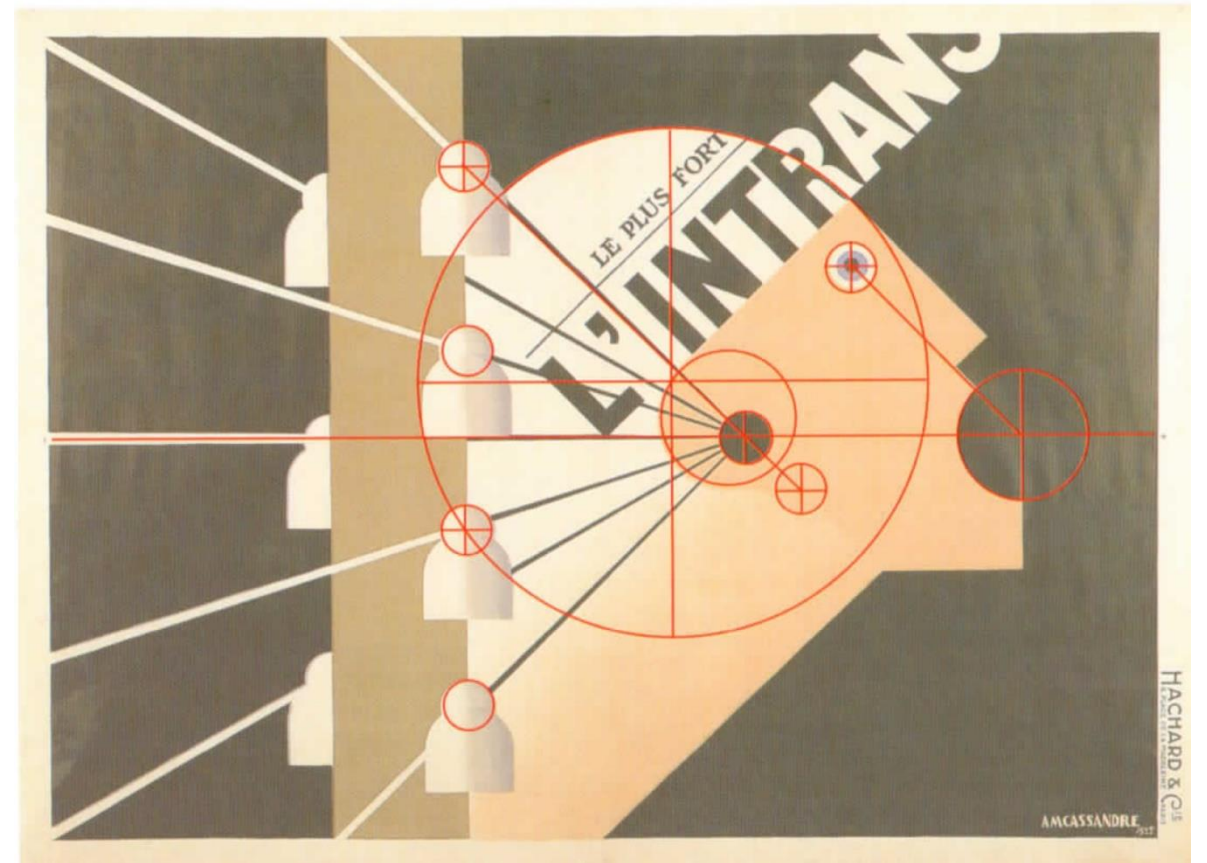
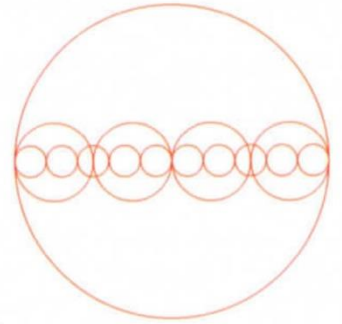


A.M. Cassandre | L'Intransigent Poster, 1925



Circle Diameter Ratios

- head circle = 4 mouth circles
- mouth circle = outer ear circle
- mouth circle = 2 1/2 small ear circles
- inner ear circle = eye circle
- inner ear circle = insulator circles
- inner ear circle = ear lobe circle



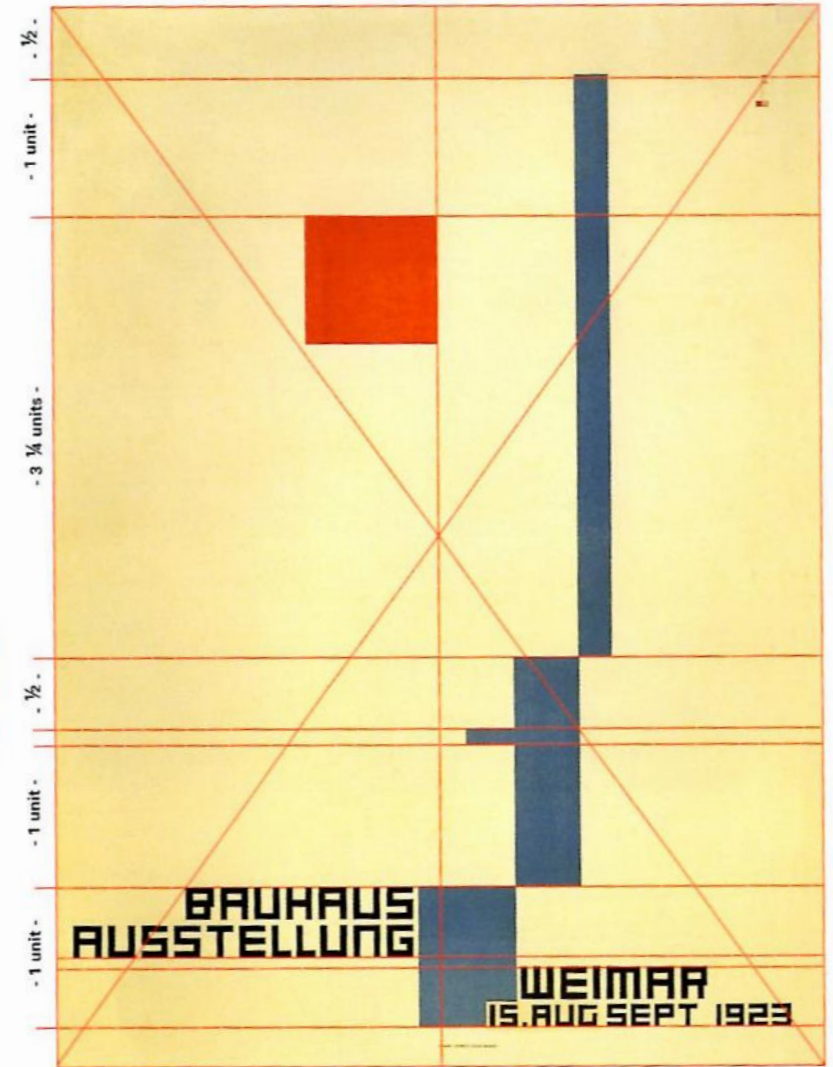
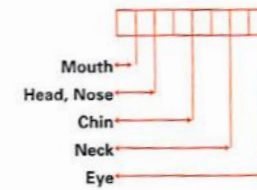
Bauhaus Seal, Oskar Schlemmer, 1922



Analysis

The eye aligns along the center vertical axis. The other facial elements are placed in asymmetric relationship to this axis. The type aligns top and bottom with the neck rectangle.

Rectangle Width Proportion



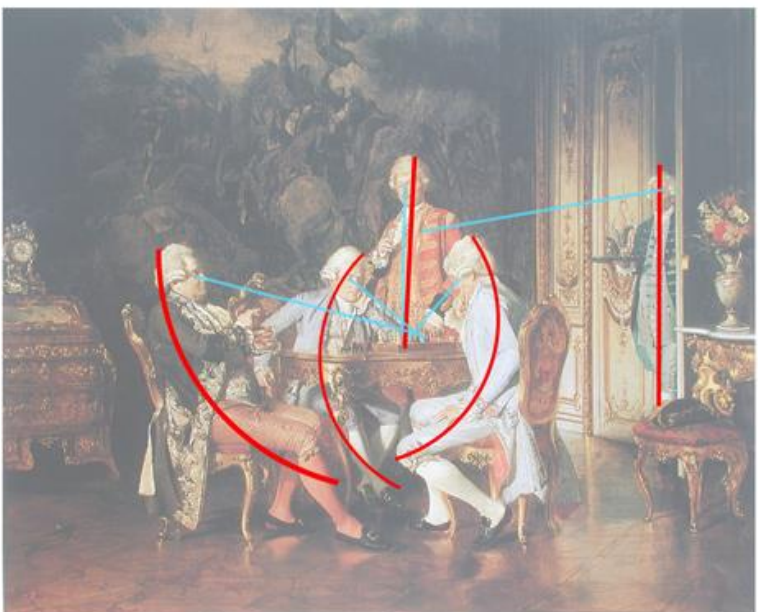
Fritz Schleiher | Bauhaus Ausstellung Poster, 1922



final color painting



basic main color rhythm



action lines and eye connection



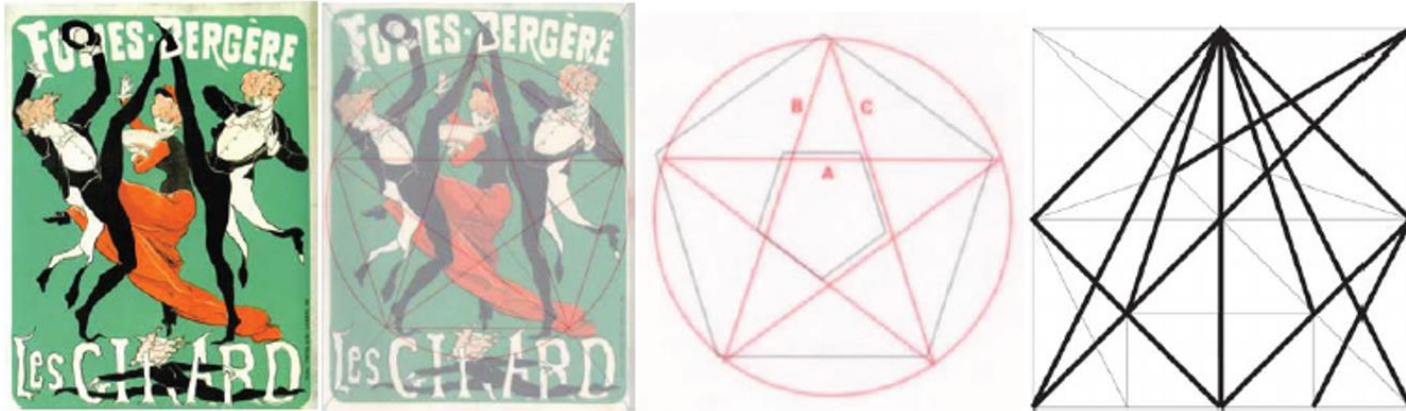
main darks and lights

ASSIGNMENT 3.2 - Part 1

1. Using your fashion photograph, identify the overall organizing geometries of the page and it's objects by hard-line drafting over them on tracing paper and/or illustrator to create 3 overlays.
2. Label dimensions, radii, angles, and identify the center of the page for each one of the three.
3. Describe your preferred geometric layout in sentence format (50 words)
4. Present 1 illustration + 3 overlays on MIRO, with the clipping, the overlays, and the description.

OBJECTIVE:

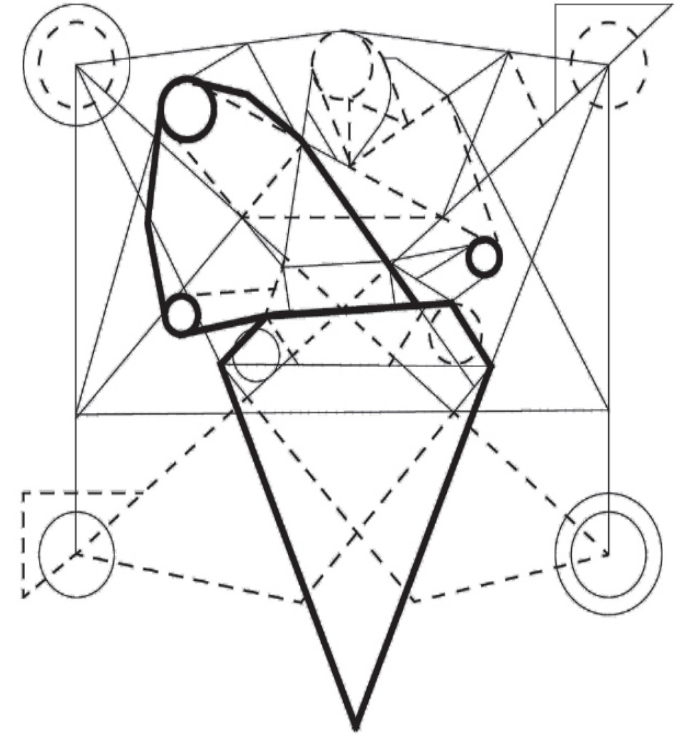
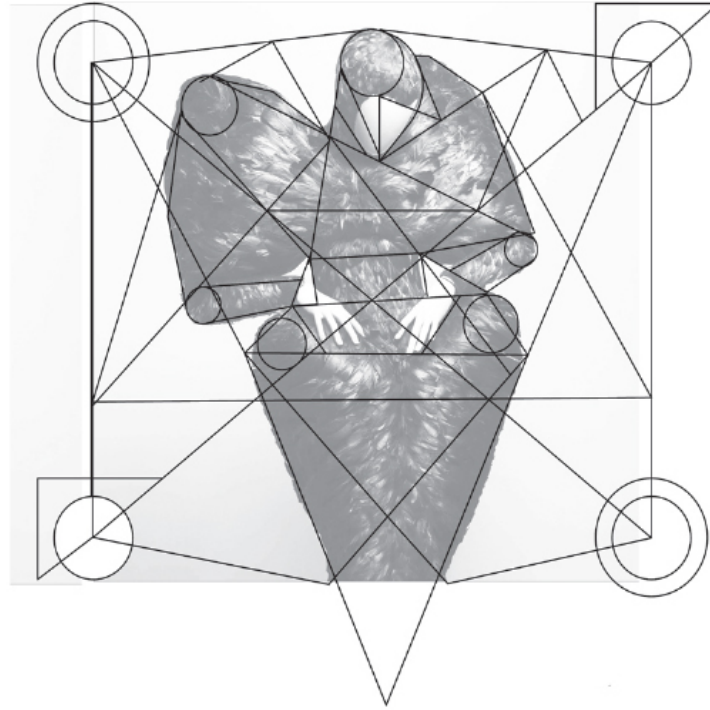
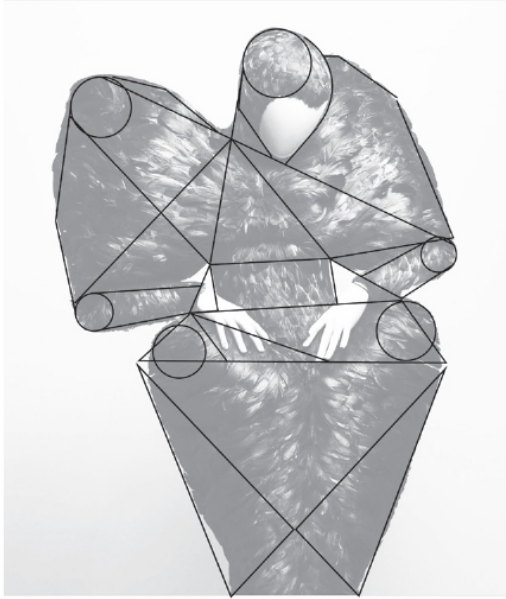
Students will learn to identify the geometric relationships and components of an illustration.



DESCRIPTION:

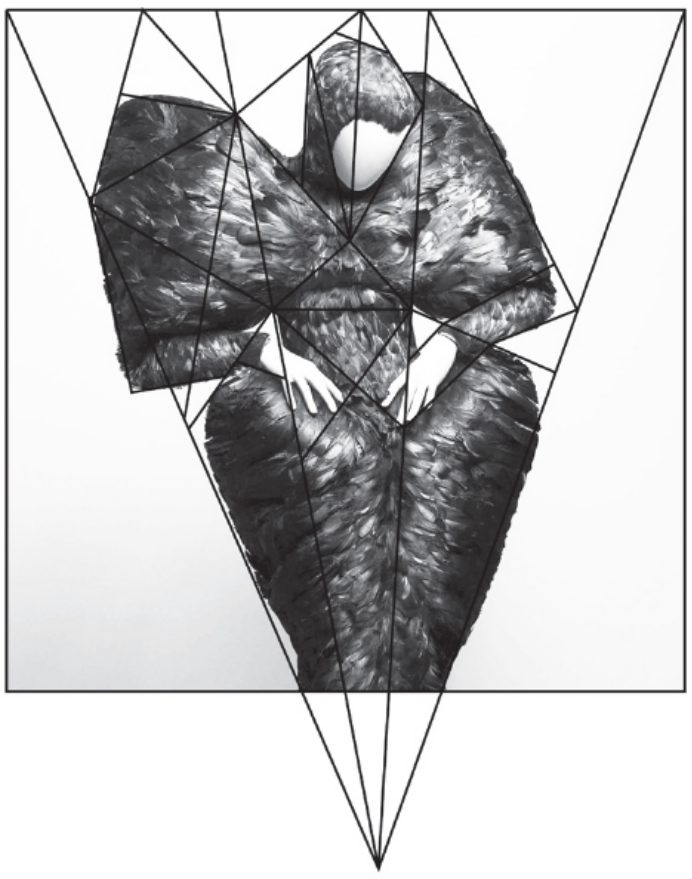
By looking at a graphic illustration, the student will break the illustration down into its component geometries and thus learn how geometric relationships and proportions affect how we view images and where the important components lay.

READING: Elam, Kimberly. Geometry of Design. Pages 01-75

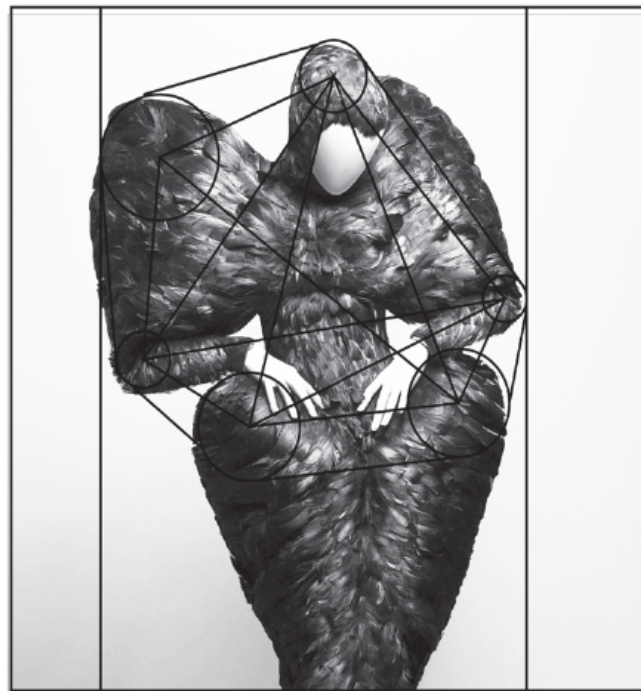


When i started Changing the weight of the lines in my compositions, i noticed dramatically, the transformation and its visual qualities and impact it made to my original image. By adding lineweight and hierarchy to my composition, you soon realize that it becomes a completely different image from when you started.

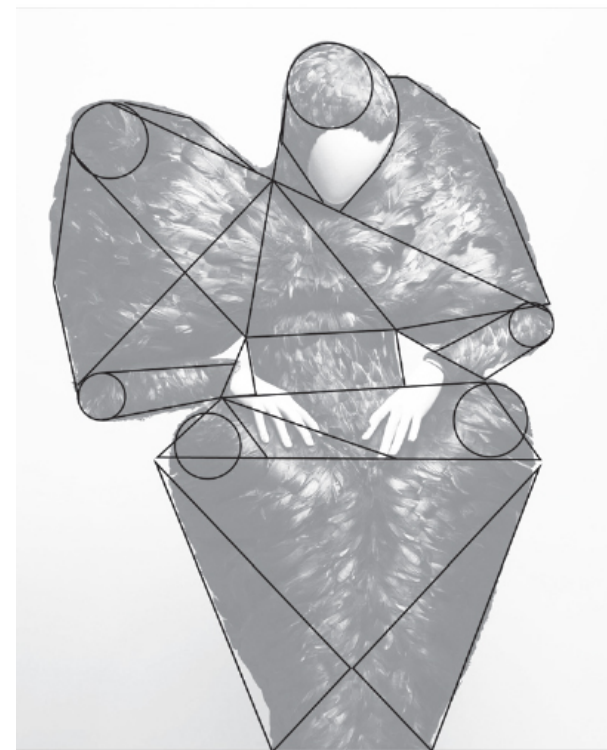
Trial One



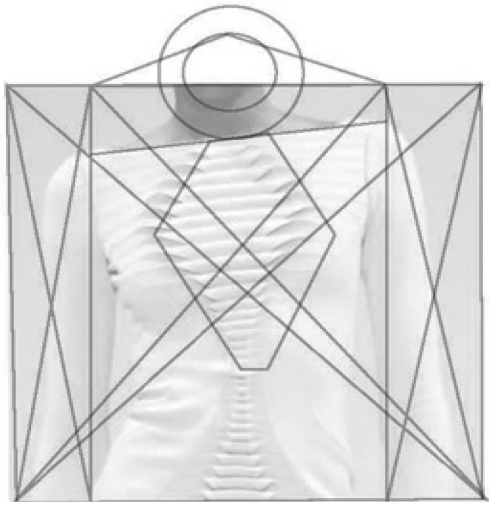
Trial Two



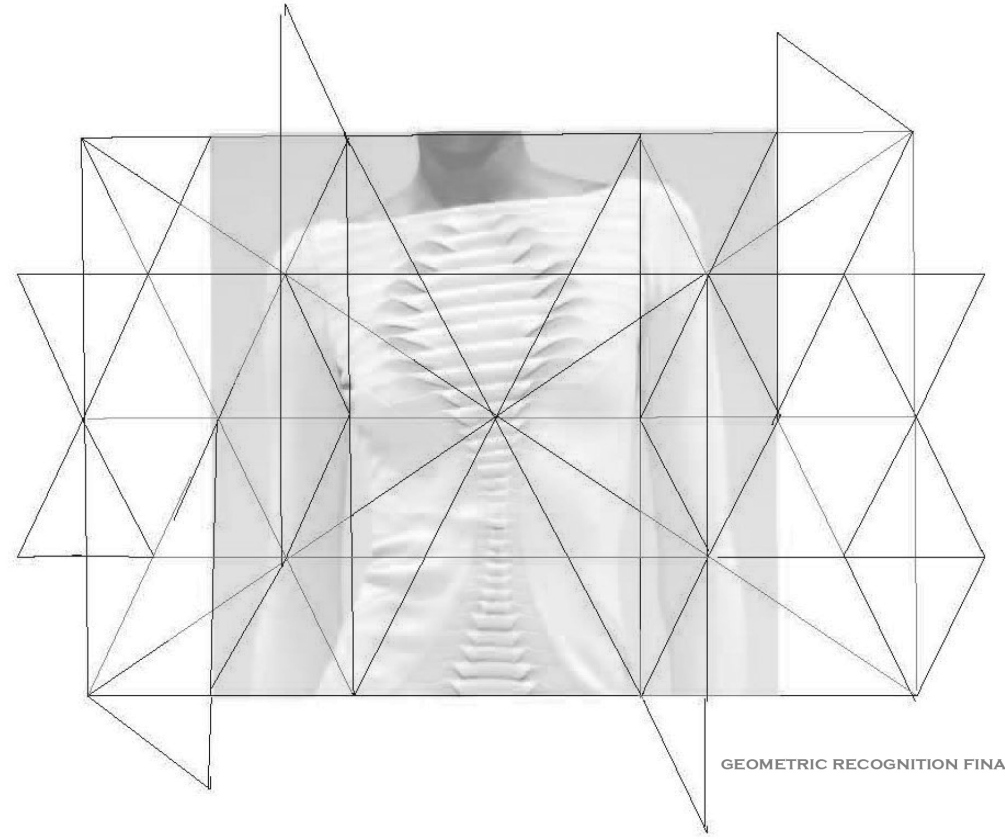
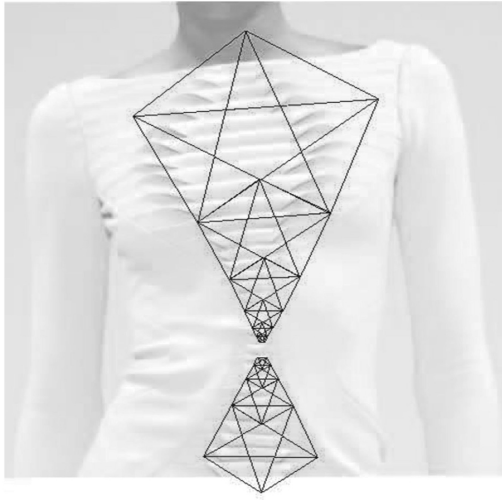
Trial Three



GEOMETRIC RECOGNITION TRIAL #1



GEOMETRIC RECOGNITION TRIAL #2



GEOMETRIC RECOGNITION FINAL MODEL

ASSIGNMENT 3.2 - Part 2

HIERARCHY

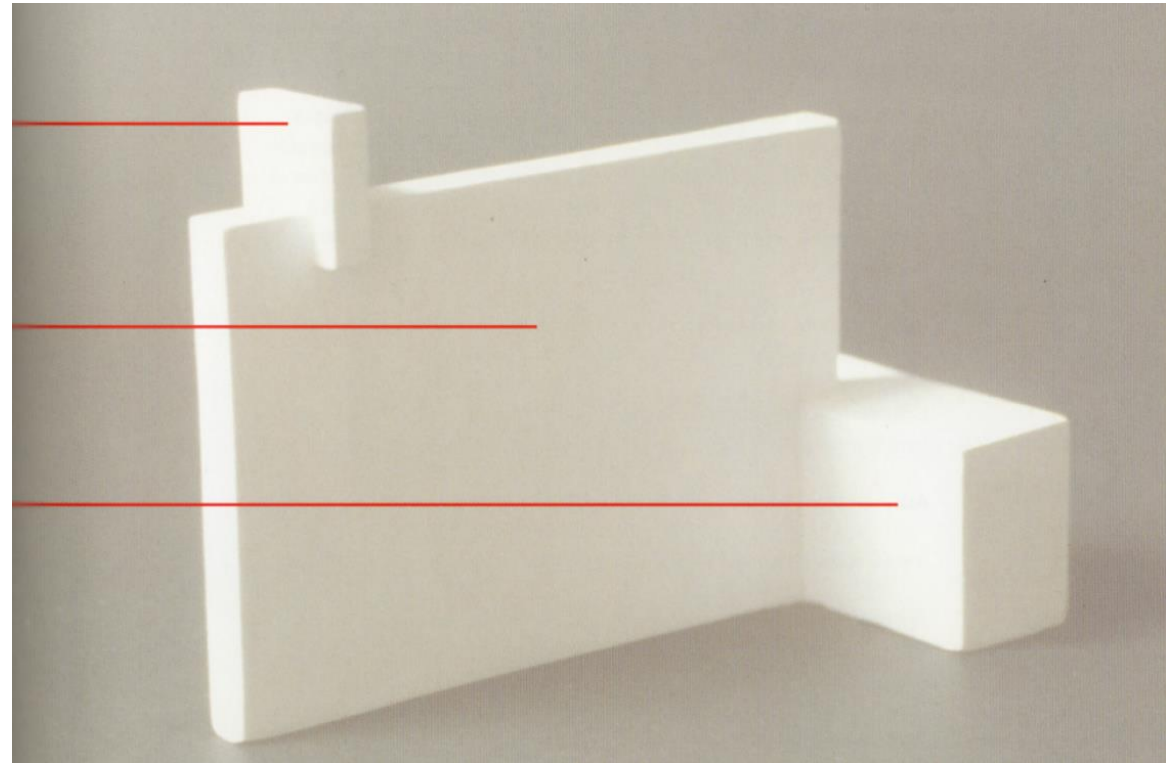
HIERARCHY THROUGH VOLUME

an arrangement or classification of things according to relative importance or inclusiveness

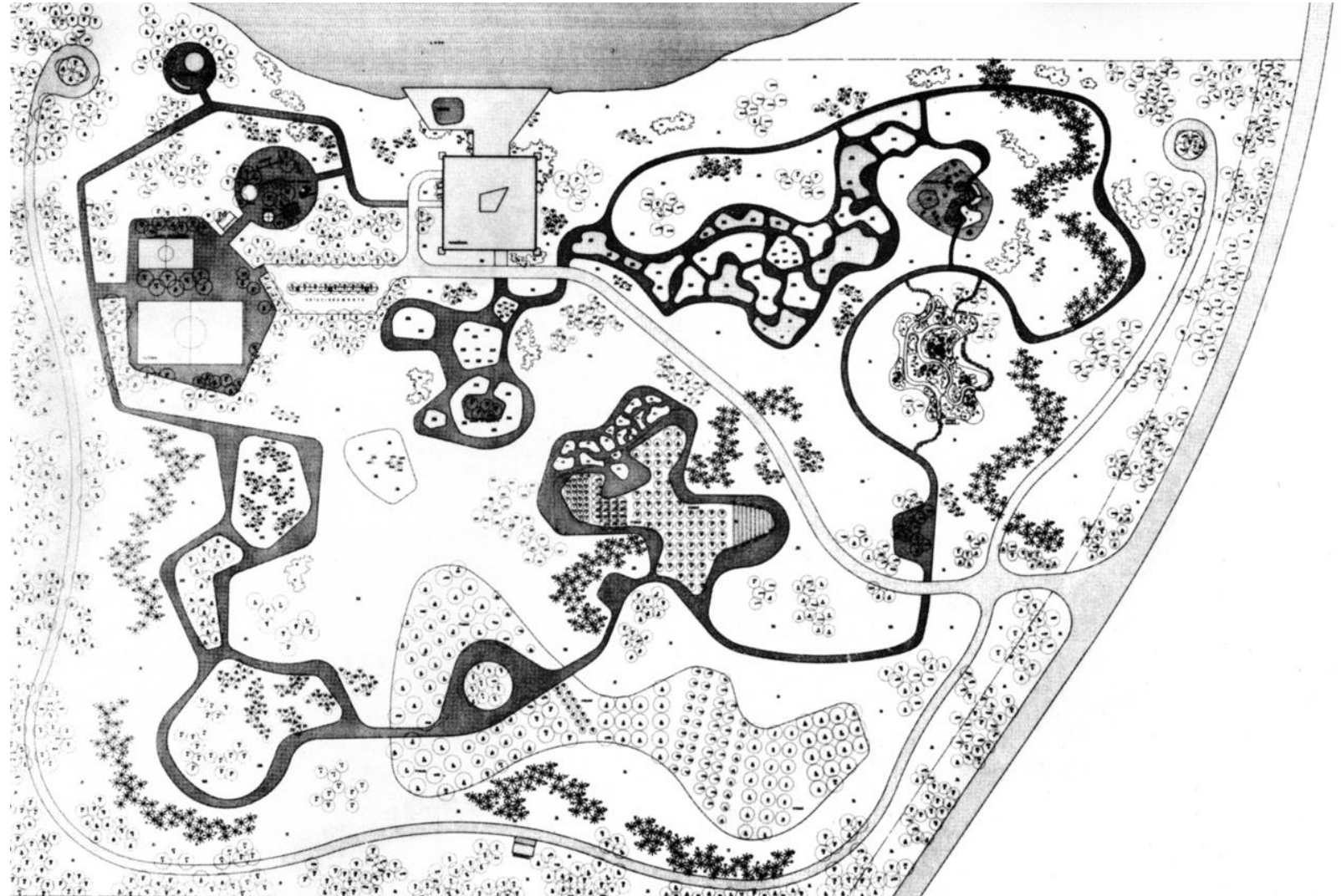
SUBORDINATE

DOMINANT

SUBDOMINANT

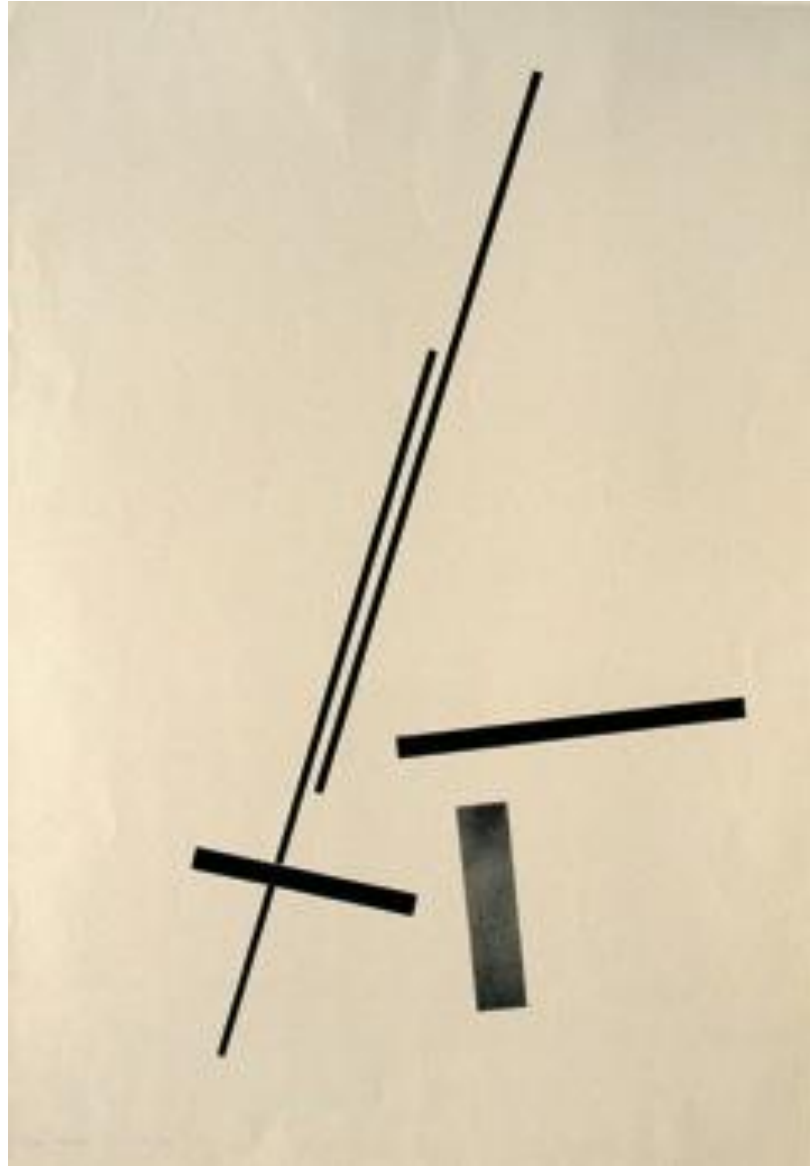


HIERARCHY THROUGH SHADE & PATTERN



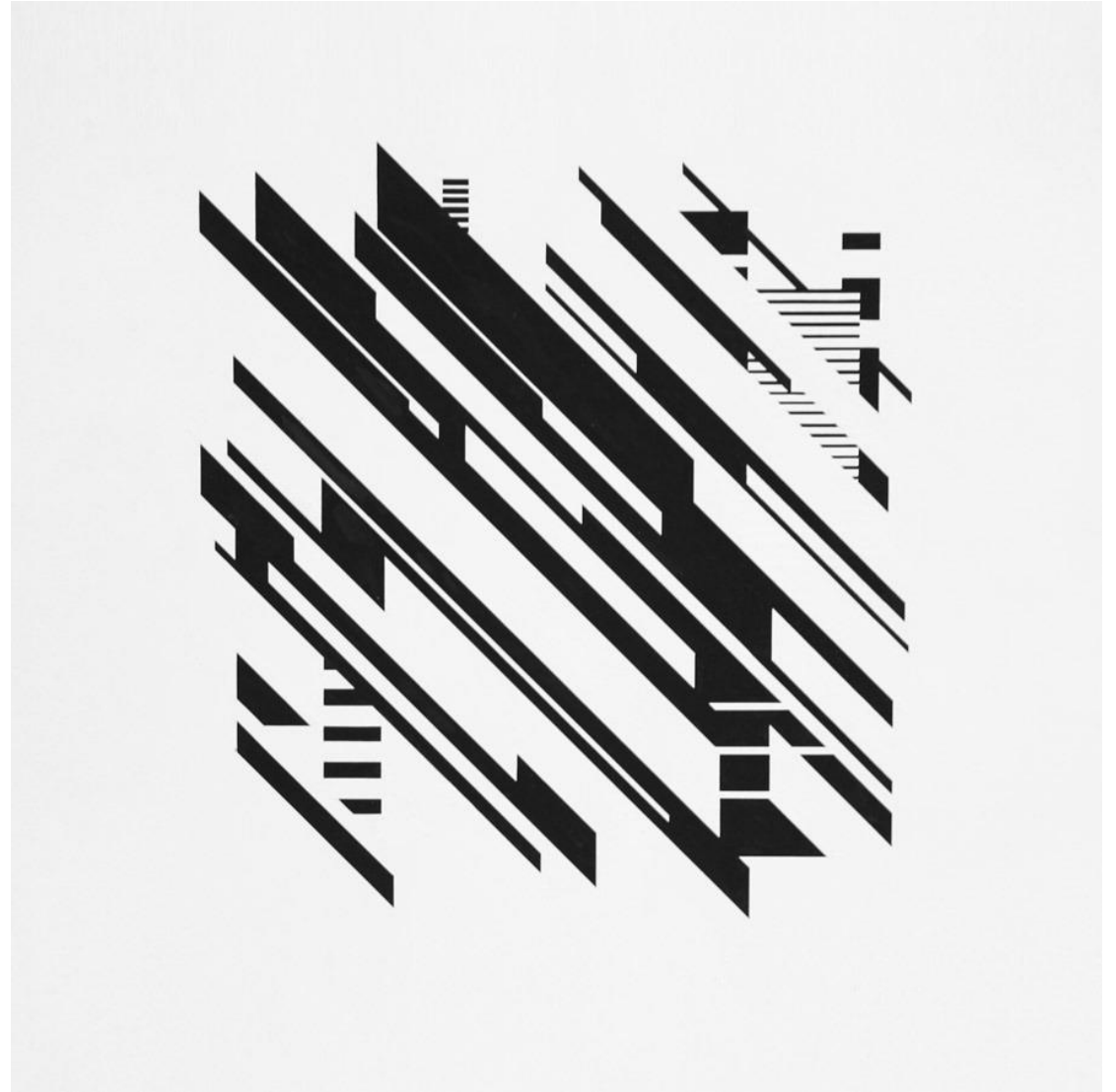
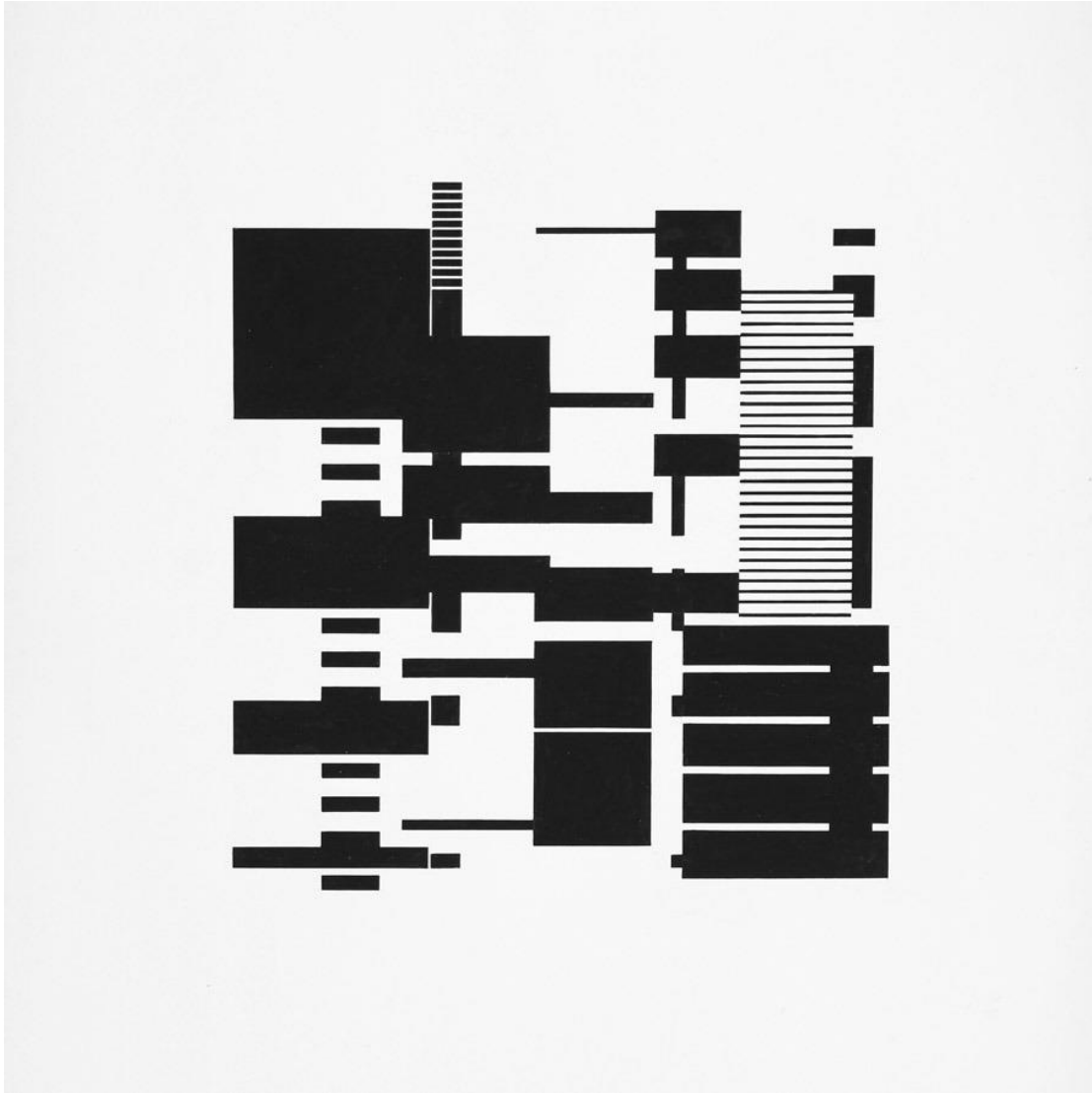
Oscar Niemeyer and Roberto Burle Marx | Residence of the Vice President, Brasilia, Brazil, 1975

HIERARCHY THROUGH LINE WEIGHTS AND COMPOSITION



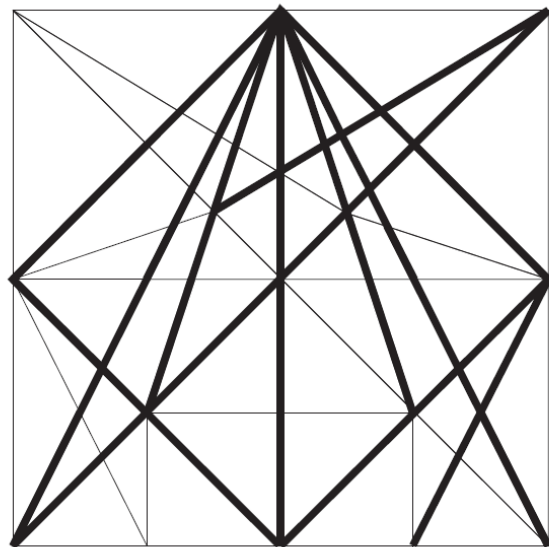
Diet Sayler | AK59, 1969

HIERARCHY THROUGH LINE WEIGHTS AND COMPOSITION

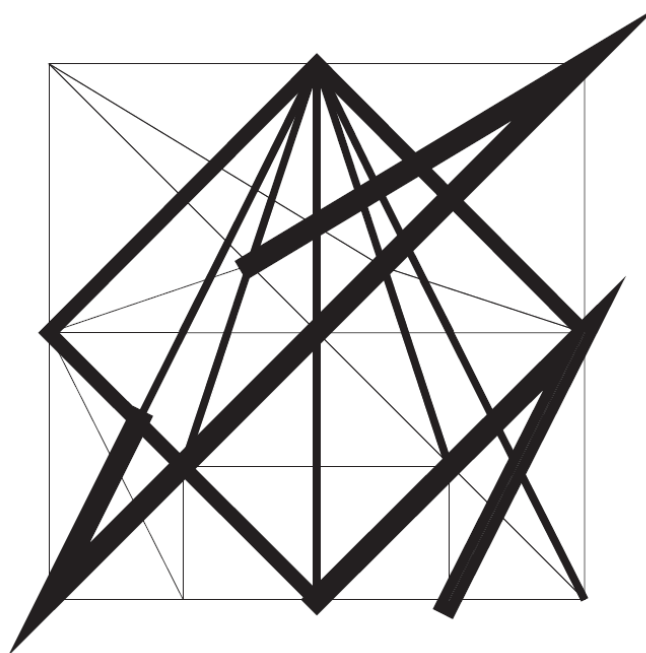


HIERARCHY THROUGH LINE WEIGHTS AND COMPOSITION

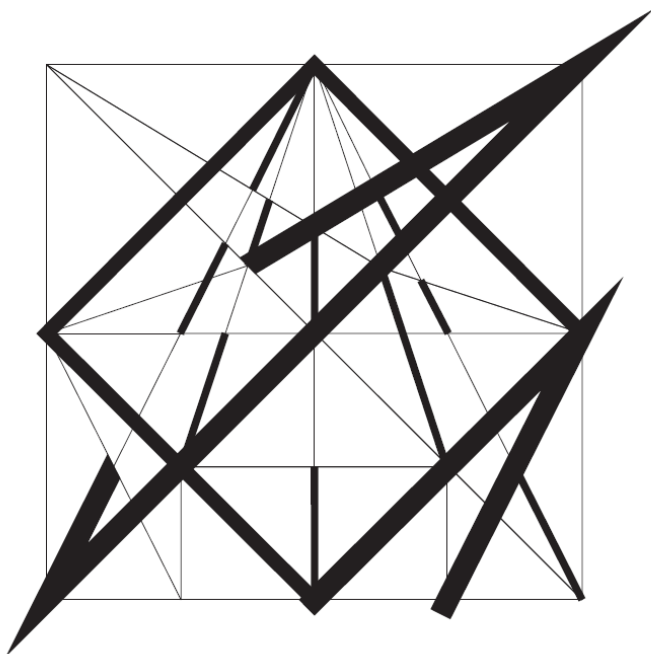
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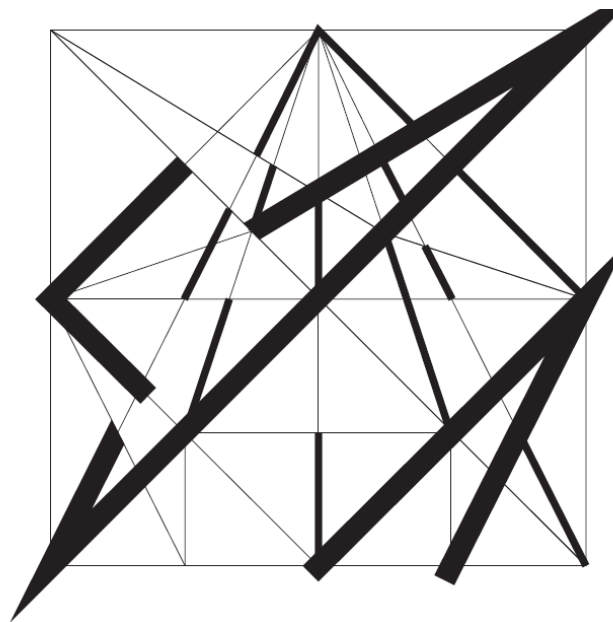
2



3



4



ASSIGNMENT 3.2

OBJECTIVE: The elements of the design should exhibit a visual balance of weight and motion. The design should contain a hierarchy of implied shapes and/or patterns. Location of the design within the format should enhance its qualities and dynamic balance.

DESCRIPTION: Changing the weight of the lines in a composition can dramatically transform its visual qualities and impact. For this project, you must choose one of your final designs from the Shape Generation project to transform in terms of line weight. Incorrect designs from the Shape Generation project must be corrected before use in this project. The design must be created at twice its original size (use a 6" or 1" square). The final design must be abstract. It may not contain any recognizable forms (i.e. face, car, fish, etc.). Lines may not be added to or eliminated from the designs. All lines of the original design must be visible.

PROCESS:

1. Take one the most success full analysis from the BASIC GEOMETRY RECOGNITION assignment and create a series of test (3 minimum) for the same composition trying out different line weights in order to create a sense of hierarchy between the forms. All compositions must be abstract. They may not contain any overtly recognizable forms (i.e. face, car, fish, etc.).
3. Redraw your drawings with pen on vellum or you may also compose your drawings using Illustrator.
5. Add a titles and print on 11"x17" paper.

Design Goals

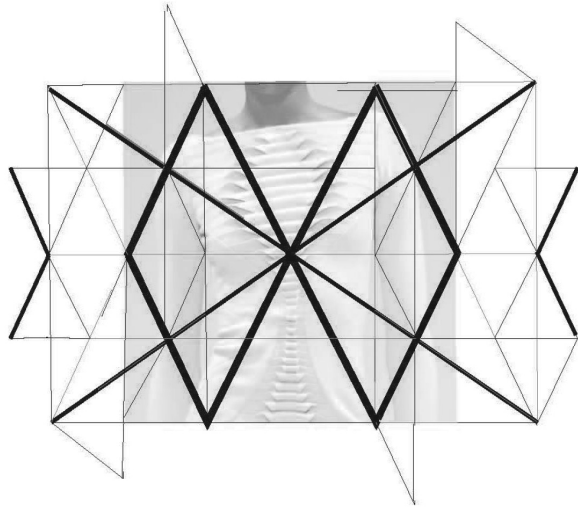
There will be 2 process steps and 2 different final options. All of the designs are ultimately derivatives of your very first illustration abstraction analysis (assignment 02).

The designs you will develop should be diverse. They should:

- Exhibit variety in the density/number of lines within different areas of a design.
- Exhibit variety in the sizes and/or shapes of areas within a design.
- Exhibit variety between designs in the organizational concepts—include both symmetrical and asymmetrical designs.
- Exhibit variety between designs in the proportion of straight lines and arcs. Finally, work to develop designs that are not obvious products of the constraining rules.

READING: Benedict, William. *ARCH 121 SYLLABUS*. Pages 37-42.

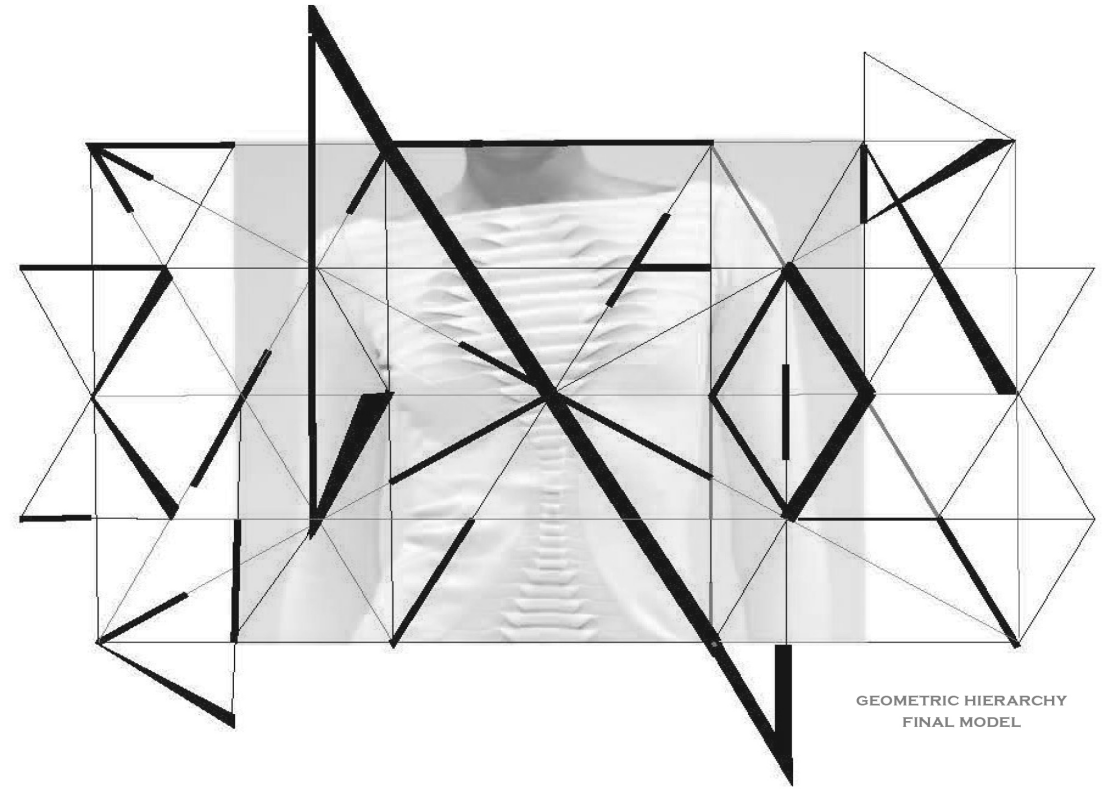
SKILLS: Line weights, hierarchy, scan, layout in Adobe InDesign



GEOMETRIC HIERARCHY MODEL #1



GEOMETRIC HIERARCHY MODEL #2



GEOMETRIC HIERARCHY
FINAL MODEL

ASSIGNMENT 3.2