(M.L. Barnett)

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(deceased)

from a subsequent [to 1912]
class, taken in a summer
session; after Mr. Wessels
had studied with Hans
Hoffman

Principles of Pictorial Composition

Glenn Wessels

This collection of notes upon pictorial composition is not to be construed as complete, or as an adequate presentation of the facts set forth. It is aimed only as an aid to the memory of students who have been in my classes and will hardly be intelligible to others. I acknowledge a great debt to Herr Hans Hofmann in all my teaching and personal research. Though the material here presented is mostly due to my own investigation, I must thank him for the discipline and attitude of mind which inspires such investigation.

Glenn Wessels.

Introduction: PRINCIPLES OF PICTORIAL COMPOSITION -- Glenn Wessels.

The world outside ourselves is a complex of forces interacting and continually shifting their relationships. We are equipped with senses which bring to our minds different aspects of this cosmos influx. These senses cannot comprehend infinities, and are limited in sensitivity, so we cannot directly sense the complete relation of things. We can only perceive the exterior world in terms of ourselves and within the limits set by our physical and mental limitations. We are equipped to sense directly only a certain limited range of orderly relationships. Any attempt to record our feelings and reactions must be done in terms of an order appreciable directly by us. Infinite change can only be implied by the use of measurable, finite quantities. Due to the nature of our senses we differentiate between the complexes of qualities presented through our senses to our minds. The qualities appealing to us as most real are spatial. "The extended only is real". But the primary quality of extension in space must be accompanied by secondary qualities. Otherwise it remains an idea--can have no material existence. Example: No color spot can be imaged in the mind as having no shape. No shape can be conceived as having no color (color including black and white.)

Consciously or unconsciously, we arbitrarily divide the cosmos of qualities outside of us into units, focal points, pieces of experience of convenient dimensions for comparison and differentiation. The world for us then has primarily: Mass, shape, measure, texture, color, movement, smell, taste, sound. No form can be clearly defined without recording by means of symbols of its perceptible characteristics.

Mass and measure judgments are based upon the kinaesthetic sense reports. Shape in three dimensions is based upon the kinaesthetic sense report. Shape in two dimensions is based upon the visual sense report. Three dimensional movement is based on kinaesthetic reports. Color is the peculiar field of visual activity. Taste and smell are also highly specialized senses.

No ordering of colors, textures, tastes and smells is possible without reference to the primary quality of reality; extension in space, quantity. Any attempt at harmony must primarily deal with measure, shape; secondarily with texture, color, taste, smell, sound, etc.,

Thus it would be impossible to predict the effect of one color upon another without also considering the shape and measure of the color plane. This indisputable fact is overlooked in most systems of "color harmony", and renders effects aimed at through them uncertain --not always as predicted. The only sound design is that based upon conscious control of all the qualities of form.

The raw material for music is arrived at by abstracting perceptible sound from the complex of qualities making up the universe, breaking it up into units called notes, endowed with measure, relative position, intensity, texture, called timbre, and order with reference to a whole form, i.e. the sonata, fugue. The raw material for painting is arrived at by abstracting color from the complex of qualities making up the universe, breaking it up into units called

planes, endowed with measure, relative position, shape, texture, and order with reference to the whole form. i.e. the shape of surface of the format. The raw material for sculpture and architecture is arrived at by abstracting volume from the complex of qualities making up the universe, breaking it up into units of mass, endowed with measure, relative position, shape, texture, and order in reference to the whole form, i.e. the shape of the "block".

Whatever the purpose of the work of plastic art, these are the basic units. The work of art parallels the world of reality within the limits of its particular medium and symbolizes reality, hence produces the effect though not the deception of reality, upon the observer trained to read its symbols. Thus it may re-present any real experience, within the limit and legitimate nature of its order. These orders are called: harmony, counterpoint, grammar, rhetoric, principles of design, etc., etc. and arise out of: (1) the limited range of possibilities of the particular mediums, and (2) out of the limited sensibility of the observer. The work of art may re-present some actual experience, or may present some imagined experience. In either case it parallels actual experience to a greater or less degree. When it reproduces actual experience to the extent of giving us the complete illusion of reality, it moves outside the world of art and the proper limits of art and into the world of actual events and our reactions are the same as though the effect it produced was a real experience. For instance: When a man upon the stage, within the scheme of the drama, shoots another man, we may observe the shooting without losing our contemplative attitude. This contemplative attitude remains so long as the elements presenting the idea of dramatic form overbalance the elements tending to the illusion of reality, of actual experience. When the stage machinery and acting is so ordered as to produce a complete illusion--where we are made to feel the experience as though it was an actual occurrence--as though the man in the seat beside has shot the man next to him, the experience becomes judged as actual and extremely disagreeable. This lack of artistic restraint, ignoring the true nature of the medium is productive of unaesthetic and disagreeable delusions in any of the arts. The true classic spirit concerns itself primarily with formal relationships, not lying effects. A lying effect, i.e. an effect which does not imply the true nature of its cause is ugly, as all insincere expression is ugly. (Bosanquet, Three Lectures in Aesthetic). The function of painting is then, not to simulate actual holes in walls, or volumes rolling out into the room. In order that the work remain in the category of things called art, there must be a balance between those symbols calling up the effect of real three-dimensional experience, and those symbols expressing the true nature of the medium, i.e. a balance between aesthetic detachment and aesthetic response. (See Langfeld, Aesthetic Attitude, and Puffer, Psychology of Beauty).

So long as the creative artist respects this restraint and balance, he is free to choose from the infinite complex of qualities in the outside world of experience, and select and emphasize as his feeling dictates. The process of artistic creation is well paralleled in the Mosaic report of creation set down in the first Chapter of Genesis: "In the beginning God created the heaven and the earth. And the earth was without form and void (chaotic) and darkness was upon the face of the deep (chaos). And the Spirit of God (the

creative spirit) moved on the face of the waters (chaos) and God said: Let there be light, and there was light, and God saw the light, that it was good; and God <u>divided the light from the darkness</u>" .....(the first ordering, the first arbitrary decision of the creative spirit).

The process of creation is one of a series of decisions, of selective emphasis, the first arbitrary and the later consistent with the first. Now let us apply this general knowledge to the matter of pictorial creation.

A. A Picture is materially a two dimensional surface. Its reality is to our senses two dimensional, a flat surface. Da Vinci says: concerning the business of the painter:

"If you, painter, will seek to please the first painters, you will make your pictures well, because they alone can guide you truthfully, but if you wish to please those who are not masters, your pictures will have few foreshortenings and little relief or alert movement, and thereby you will fail in that part in which painting is held to be an excellent art, that is, in giving the effect of relief where there is nothing in relief."

Matisse says, in the same connection: "Whether a painting is a horse, a nude woman or any object you wish, it is really and essentially a flat plane with colors upon it arranged in a certain order."

B. We are so organized as human beings that we perceive the real world as having three dimensions: up-down, forward-back, right-left. These judgements are determined by our own position in space relative to the object or group of objects and the surrounding space which we perceive. Information is brought to us by separate sensory channels which mutually correct the deceptions due to the limitations characterizing particular senses.

C. The problem of the sincere artist is then: to express his experience gained in terms of three dimensions, within the nature and by means of the limitations of the two dimensional pictorial medium. To contrive a destruction of the essential flatness of the picture would produce a deception. One of the reasons that easel painting has fallen into disrepute and disrespect is because its purpose has been mistaken as the production of such deceptions. Such lying expression is untrue to the nature of the medium and is in the same category as any other hoax. We must distinguish between effect and deception.

D. The actual world as reported by the inter-action of our several senses and memory is made up of volumes in space. The three dimensional nature of the volumes is reported to the mind by the kinaesthetic senses, the two dimensional aspect of the volumes from a given point in space and the finer surface qualities, color and texture, are reported by the eyes in terms of planes of light. The actuality of three dimensions is reduced to a pattern of light planes upon the retina of the eye. In the mind these light planes are unified with experience lying latent in the memory which has been derived from other senses and previous experience. Thus we interpret this visual pattern as having three dimensions, and other qualities not directly seen.

E. The visual unit is the plane of light. Before this retinal pattern takes on plastic meaning it must be edited by the brain. The plane of light corresponds to the plane of pigment upon the canvas. The plane of pigment upon the canvas must be reorganized by the mind of the painter, so as to report to another observer the full truth of the three dimensional experience. This modi-

fication will be towards reducing the present experience to symbols which will call upon the plastic knowledge lying latent in the mind of the observer, and thus enable the new observer of the painting to reconstruct in plastic terms in his own mind the effect which the experience with nature had upon the painter. A copy of the accidental pattern of light planes on the retina will not necessarily be read by the other observer as a report of reality. The units (the pigment planes) must be reorganized in such a way as to symbolize three dimensional form--the report of the kinaesthetic senses and the sense of touch must be included in the record in order that the painting correspond in effect with the complete perception of nature.

F. Man judges present experience by past experience. Meanings are accorded symbols which conscious or unconscious past training has associated with these symbols. A picture will be judged in terms of past experience. If we consider what is our most ordinary point of view with relation to the earth's surface we will find that this is the point of view assumed as having been the artist's when he painted the picture. We live visually in that part of space which is between the horizon and our toes. See Fig. 1-2.

Fig. 1

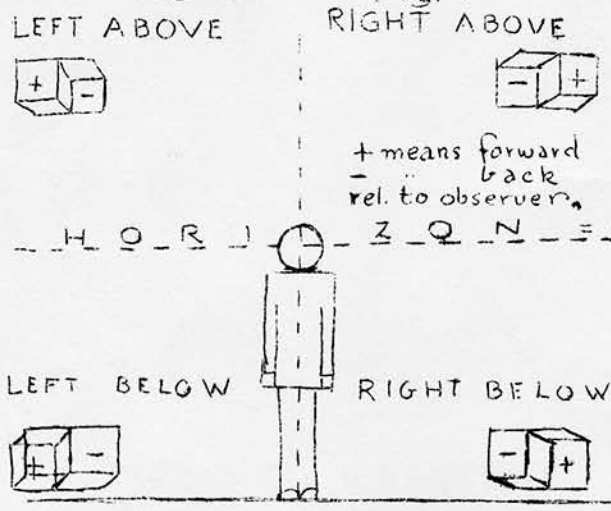
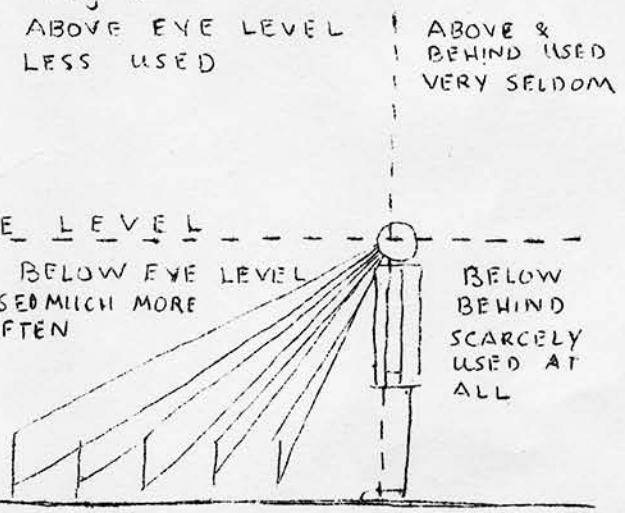
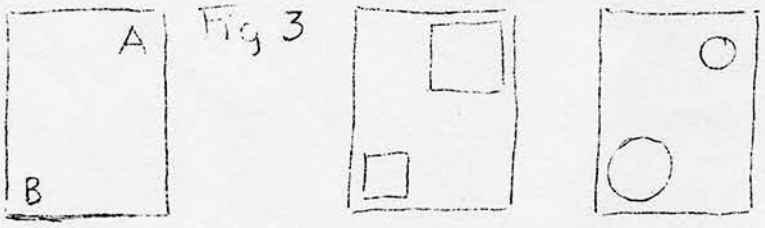


Fig 2



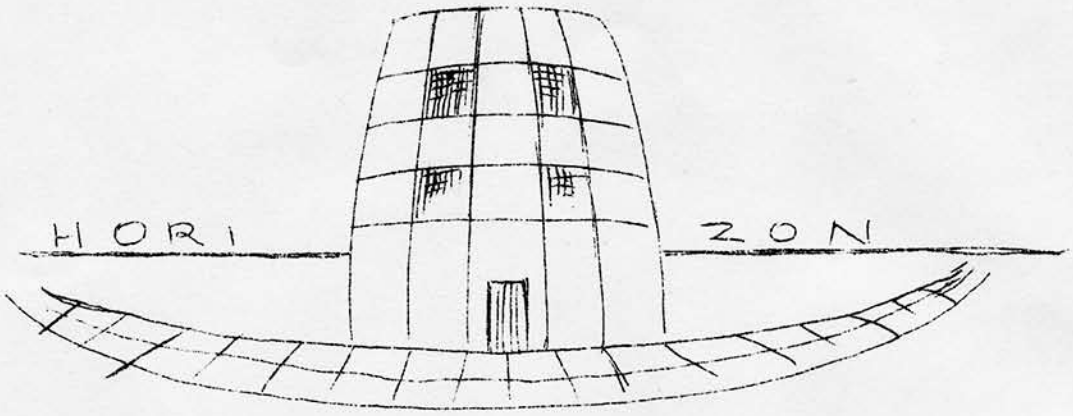
Unless special evidence to the contrary is brought into the graphic symbol we assume all things seen to be below us. (1) From this we usually judge up (A) on the visual pattern to mean back in space, and down (B) as being in the foreground.

Fig 3

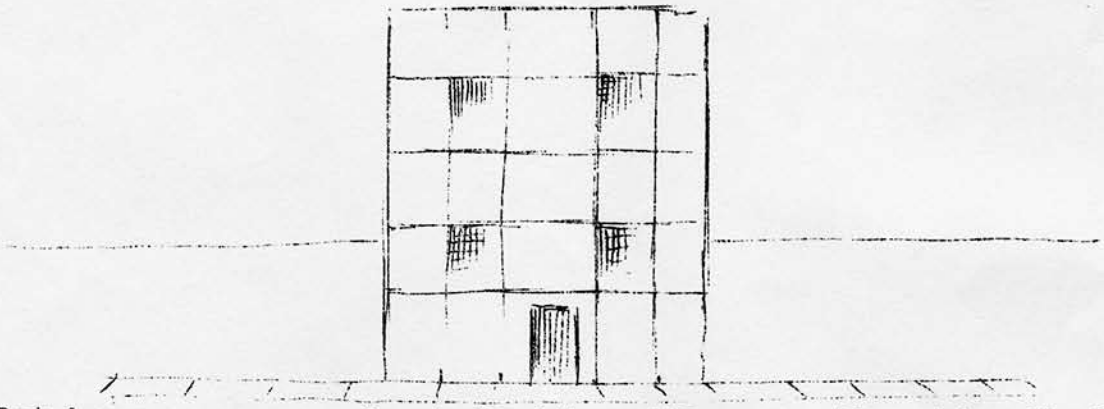


G. We have also a sense of frontality, a sense of that which is horizontally parallel with us. We have organs which report our position relative to the earth's surface, and our two eyes. We measure all things by their relation to our personal vertical and horizontal. Those things are called horizontal which are parallel to the line through our two eyes --

parallel to our face -- facing us -- and those things vertical which are parallel to the central axis of our bodies. Thus the borders of the rectangular picture are the projections of our sense of horizontality and verticality, excepting those pictures intentionally otherwise placed. Pictures in books, on walls, etc., will first be assumed to be facing us, unless evidence of other position is immediately forthcoming. This sense of frontality is however not true to the visual pattern, but actually true. The visual pattern of a tall house and sidewalk facing us will appear somewhat thus: Fig. 4.



Whereas, the better symbol for a tall house facing us, that is parallel with our face, would be thus: Fig. 5.

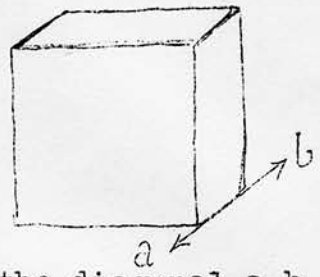


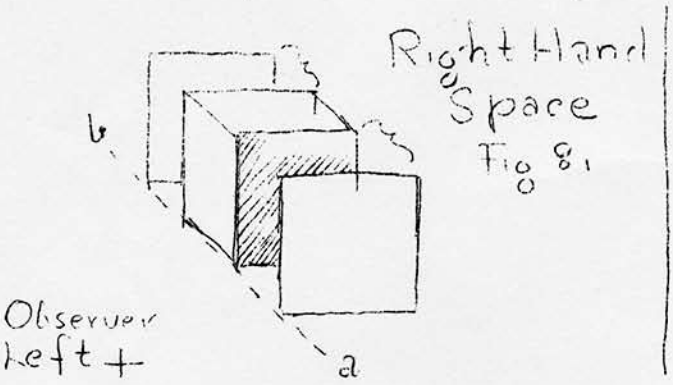
But here we are confronted with a dilemma. The sidewalk far to the right and far to the left is actually farther from our position in space than the sidewalk in the middle. How are we to create a symbol which will tell this plastic truth as well as tell the observer of the picture that the sidewalk is a straight line parallel with his face? The observation of such lines leads us to the conclusion that our mind and eye, working together arrives at some such result as this: Fig. 6.

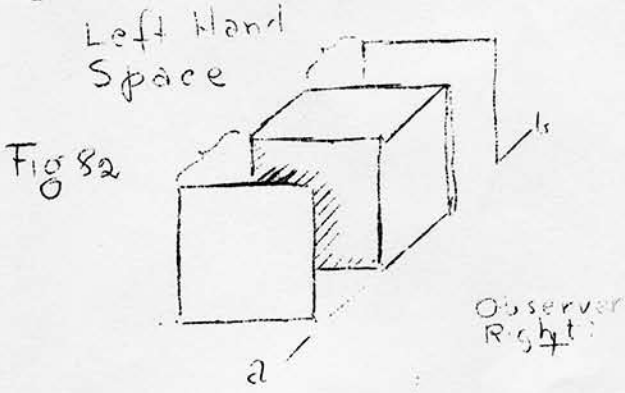
At every possible break in the line, caused by light planes, changes in texture, or overlappings by other forms, the parallel

line slips up, though retaining its parallelity. This is because we see in "bites" of vision. (See table line in Cezanne Still-life, Fig. 23). This same thing happens at the horizon in Rembrandt's landscapes and all through his drawing and etching this principle is subtly used. It is the resultant symbol arrived at by the working of the mind and eye together.

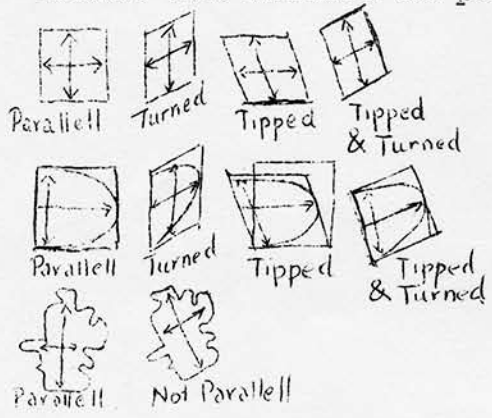
(1) There are pictures however, which occupy themselves with objects and space seen entirely from the right or left side where the observer is not directly facing the subject matter. (See Fig. 6a, Rembrandt and 6b, 6c, 6d). Left hand space for instance, will be symbolized by Fig. 7. Volumes seen from this position will show their tops, sides, fronts. If their fronts are parallel to the observer their front plane should be represented as such by relation to the picture format. If we desire to lengthen such an object we move its front plane forward. Directly forward in this kind of space will be symbolized by the diagonal a-b (Fig. 7). To push back into space the back plane would be moved up on the same diagonal. Fig. 8.







H. Our vision of the actual world has no definite borders. A picture has definite borders, limitations. It is by means of these limitations, that we can activate the flat picture surface in such a manner as to achieve the effect of three dimensional form. In accordance with past experience we assume the picture's plane as parallel to our face. Thus lines and axes within it that are parallel to the borders of the picture are assumed to be parallel to our face and planes bounded by such lines or having axes parallel to our horizontal and vertical of the format are assumed as parallel to our face. Fig. 9



(1) When we move an axis of a plane upon the surface of the picture in such a way that the axis is not parallel with our face and the vertical and horizontal, we have introduced the effect of the third dimension.

I. When other criteria fail, we can judge the position of recognizable objects as being far or near by the overlapping of their shapes. There are certain geometrical forms, simple enough for us to perceive and remember as wholes, which we expect to find completing themselves. (See Giotto, Fig. 9a for emphasis upon basic geometry). A tree which is definitely circular in shape partly hidden by another tree does not lose its complete circularity for our minds. We expect the hidden parts to complete the circle. (Fig. 10) If the two trees are of shapes in which we could find no definite order their overlapping might be distinguished by secondary characters, such as those of color and texture and might or might not give us an idea of which was nearest. (Fig. 11) It is true that rough texture and strong contrast are usually associated with nearness, and soft texture and weak contrast with distance, that intense colors are associated with nearness, and colors lacking in intensity and brilliance are associated with farness. It is also true that a big object is judged nearer than a small object, other things being equal. (Fig. 13-14) All these factors must be considered when placing the planes within the picture and filling them with pigment. But a definite shape overlapping another definite shape is a more positive cue to forwardness and backwardness than any other of the quality variations described. (Fig. 15) It is a primary evidence of the third dimension. The secondary cues to third dimension are not strong enough to overcome definite recognizable shape overlapping. Thus, it is all important to properly dispose the shapes of color areas before attempting to paint. Drawing is the stronger means of presenting the idea of three dimensional form. Color and texture the weaker.

(Fig. 12)

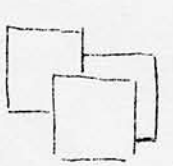


Fig. 10

Fig. 11

Fig. 12

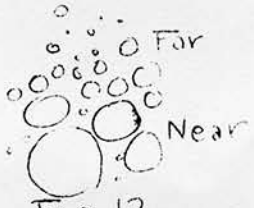
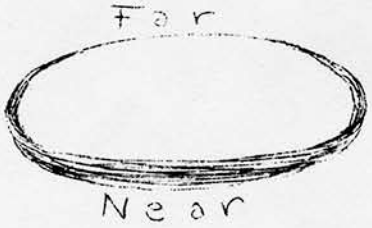


Fig. 13



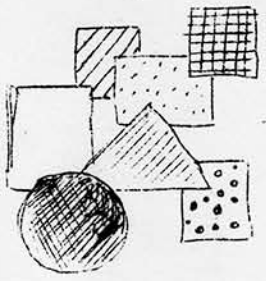


Fig. 15

(1) Then by means of relative position upon the picture plane and by varying the shape of the planes of pigment upon the picture plane, by means of overlapping, and secondarily by means of texture and color, the association of planes in the picture with spatial position can be controlled, even though none of the planes construct recognizable objects. Purely abstract formal organizations are thus possible. (See Fig. 15A,

Kandinsky). This was recognized by the masters, as evidenced in their sketches and studies, (See Fig. 16) though the abstract construction was often masked by an apparent reality in the finished product because of the necessity for popular understanding of subject matter in terms of recognizable objects. In the decadent Renaissance formal organization was forgotten in the attempt to reproduce, to manufacture illusions of reality. Only when painting was freed of the necessity of service to propaganda of various sorts, and became practiced for its own sake, as music has been for a longer time, were the principles of formal organization rediscovered. (See Durer, Cambiaso, Michelangelo) Fig. 16, ab,b,c, and 6a,6c.

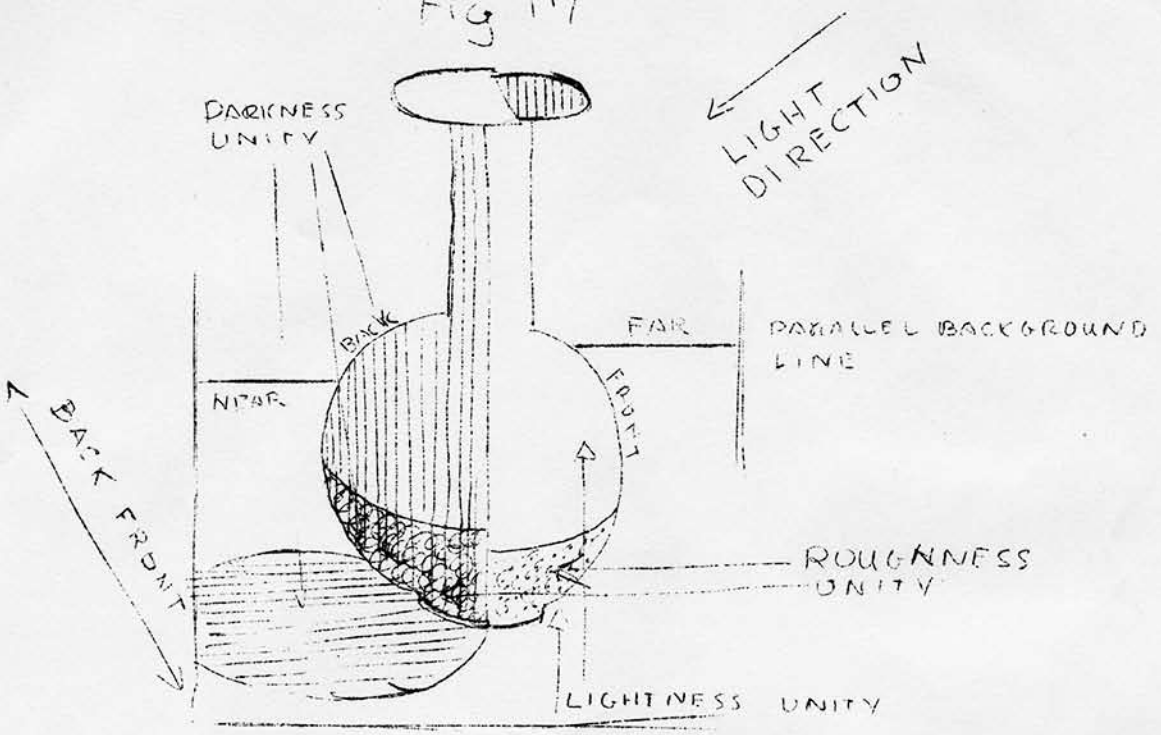
J. Art may be defined as selective emphasis. Each person will select according to his own sense of order and rhythm and within the breadth of his own mental vision. Thus no two true artists could paint any subject just alike, any more than two true musicians would develop a given motif in exactly the same way, or any two men write exactly alike. The artist may choose to emphasize any phase of the infinity which nature presents to our finitely limited senses--he will naturally emphasize that phase of whichhe is most cognizant. Just as it has been said that there are as many philosophies as there are philosophers, so it is that there are as many approaches to art as there are artists. The Cubists chose to emphasize form at the expense of light, the Fauves, movement at the expense of mechanical-utilitarian vision, the Impressionists, light at the expense of form. But in the work of certain men a balance is always dominant. Example: Renoir, though an Impressionist in method, did not sacrifice formal third-dimensional relationships, and the better Cubists presented within limited color ranges the effects of light on form as well as form itself, and the present Super-Realists tend to organize on the same abstract basis as the Cubists, though their purpose is towards the presentation of literary ideas, moods and emotions rather than purely abstract order and beauty.

K. The artist then may select and order any unities which he may perceive or remember of having perceived in nature. Form unities, light unities, hue, value, or texture unities, movement unities may be emphasized for their own sake, alone, as abstractions, or in any combination. The painter's symbol for any or all of them will be a plane of pigment in combination. These unities cross each others borders in reality, and when abstracted separately will by no means give the effect of actuality entirely, but are legitimate material for the creative artist, in any combination. Fig. 17, a vase, seen from the left, in right hand space.

The artist may take specific, actual instances, or imagined instances. It is only the mechanical, uninspired copyist of detail who sets a kind of color photography as his goal and has nothing to express, who possesses no mental attitude, no understanding of a consistent actuality behind shifting appearances, whose crass, mechanical craftwork has made museums deadly places and whose efforts at superficial accuracy have distorted painting

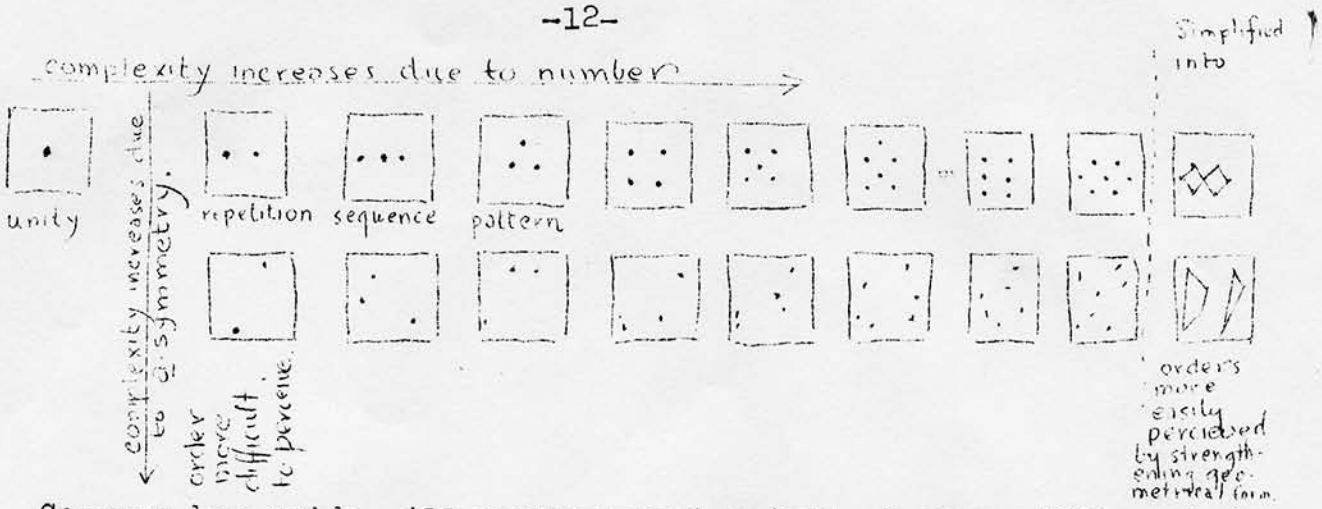
from its true goals, who will not be cognizant of these refinements. The goal of painting is the same as that of music and of architecture; beauty, rhythm and subtle order beyond objective appearances.

Fig 17

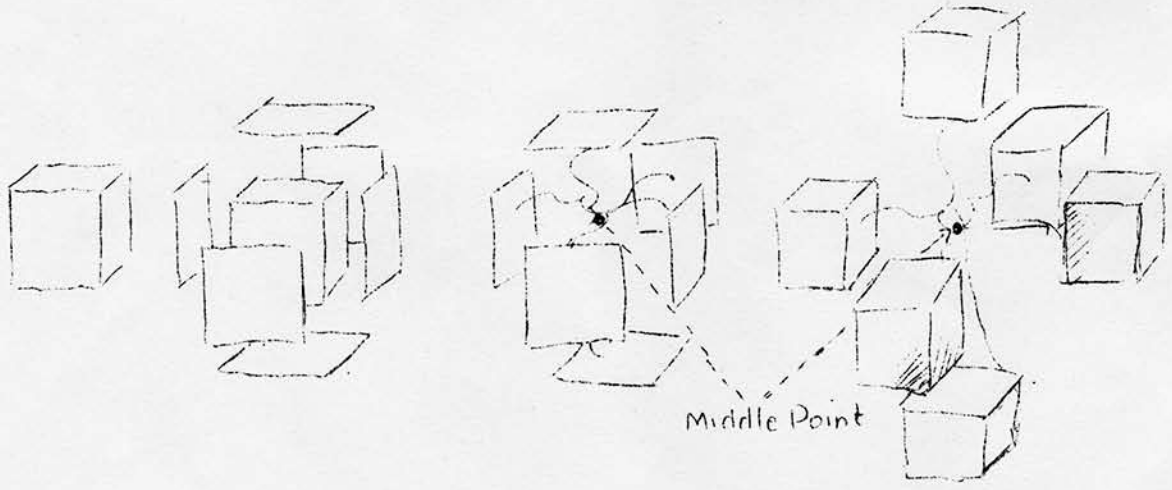


L. A picture is composed of planes of pigment operating upon the eye as planes of light, and if correctly ordered and related, impressing the mind with ideas of rhythm, unity, coordination, balance. The mind is limited in its direct grasp of complexities. We can grasp a simple order of one, two, three, four or five units, perhaps even six or seven, but hardly more. The planes making up the picture must be subordinated to general movements or to forms so that they relate in groups which in turn act upon the mind as unities. (Fig. 18) The picture, every part of which is equally insistent upon attention can only be enjoyed as art when the observer can sense the order in its construction. If the drawing is good, if the true plastic order of nature has been comprehended and interpreted legitimately in terms of the medium, the colors and all the other elements going to make up the picture will be harmonious. There is no form independent of color, nor any color independent of form. Change one and the other changes its effect.

The picture must present to the senses a dominant order which is immediately perceptible. The number of complexes or groups composing this order is dependent upon the geometrical disposition of the units. (Fig. 18) For instance: units composed in straight lines or simple geometrical figures are more easily perceived as standing in orderly relation than those which do not form easily recognizable geometric figures. Hence the older superficial "rules" for composition in triangles, squares, S curves, etc., etc., and such more thoroughly developed systems of flat design as "dynamic symmetry".



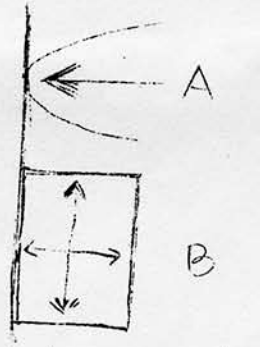
M. Cezanne has said: All volumes must rotate about a middle point. A picture which is a unity is like a planetary system, the sun of which is the middle point. Although the "sun" may be objectively lacking, the planets will remain in certain relations due to their relative tensions on each other. The middle point is the balance point of all these tensions. These tensions, corresponding to the laws of gravatation, are evident visual relationships. If the units in the picture are presented in such a disposition that the relations between them correspond to our normal visual spatial experience in some degree, the tensions between them will be perceived as corresponding to those of an actual three dimensional system. Fig. 19. The middle point is the balance point between all the tensions in the picture. The symbol of space arises out of relationships of planes or volumes to each other.



Note in this connection the Durer Composition, Fig. 27. The heads are plainly "balanced across a middle point somewhere in the region of the grouped hands and the space is left hand as in Fig. 19.

N. Of the qualities of reality, planes of light, or planes of pigment upon a canvas can be made most easily to symbolize two dimensional extension. But by their shape and spatial relation relative to the format and relative to the visual experience of the observer they can be made to carry the meaning of three dimensional space. Indeed, if not consciously controlled with reference to these same three dimensional associations, they will often take on three dimensional meaning unintended by the designer of so-called "flat" designs. It is impossible to achieve completely balanced pattern without strict attention to three dimensional effects. The only dependable two dimensional rhythms are the result of considering the three dimensional meaning of all elements in the pattern and controlling and balancing all elements as regards the full three dimensions.

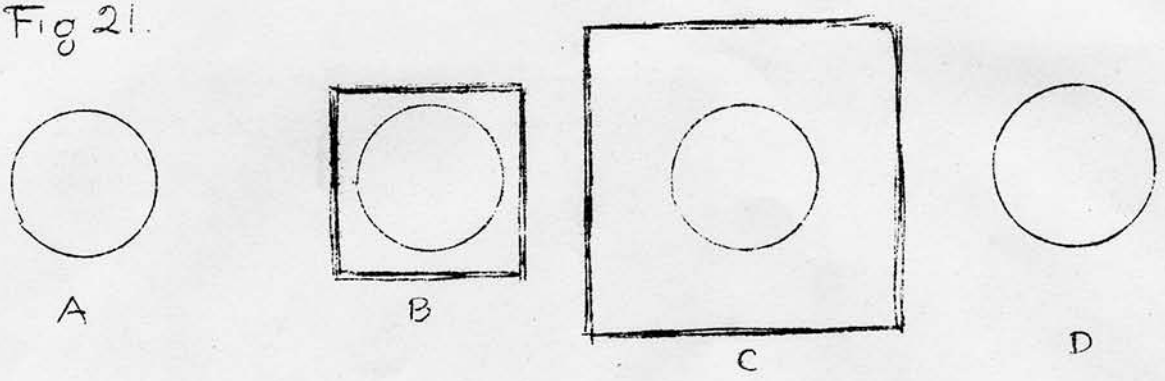
By their shape and relation one to the other they may symbolize movement, by their color they may symbolize forward and back, i.e. relation to distance or foreground, warm and cold, by texture they may symbolize roughness or smoothness--and some work has been pronounced effective, particularly that of Paul Klee, where planes of pigment symbolize smell and taste experiences and sound experiences, though such symbolism is far beyond the understanding of the majority. For most people it requires a special preparation even to interpret planes of pigment as having movement meaning, let alone the less obvious symbolism of sound, taste and smell. Movement meaning in a plane upon a two dimensional surface is purely a matter of relation between the planes themselves, to the format, and a matter of the shapes of planes and their spatial relation real or imagined to the observer's position. Individually planes exhibit greater or less movement possibility due to their shapes. Fig. 20.



O. Proportion effect in the picture is due to both abstract and objective relationships. What architects call "scale", is due to abstract size relationships. Within the format the element gains a certain size-effect due to the relation measure of the plane to the measure of the format, Fig. 21, and this is secondarily affected by the measure relations of the elements among themselves. An object perceived in its environment in the natural world has a different size effect than has the form of the same object placed within a pictorial format.

20 a
(Cezanne)

Fig 21.



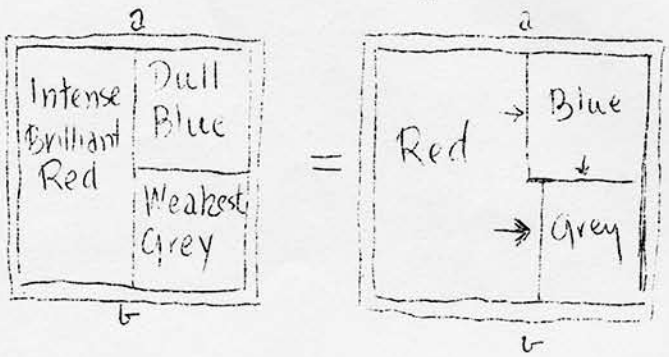
Thus distant mountain peaks lose their size effect when confined within the borders of a snapshot. What is big in the natural appearance seems bigger, and what is small in natural appearance seems smaller when placed within the picture frame. See the ~~Corot, and~~ Cezanne (2°) and Mantegna (Fig. 21A) reproductions compared to photos from some observation point. In each case the artist has modified the measures to correspond to the new system of relationships imposed by the picture frame. When placed within a picture frame, the foreground tends to exaggerate its size effect and the distance diminish its size effect. Thus the perspective illusion is exaggerated and must be corrected in the drawing of the artist. Again, in order to achieve a true record of proportion effect in nature, objects must be given their due of space surrounding them. It is a common failure to pass over the space between objects as unimportant. When we are cognizant only of objects and draw them unrelated to their surrounding space the composition is crowded, and to the sensitive eye the objects presented do not give the effect of life. Rembrandt's sky space in his landscape etchings and the generous allowance for space in Mantagna's Padua composition Fig. 21B are examples of sufficient space presentation. A way to find out how much space is normally seen in one "visual bite" is to fix the vision on a middle point, which will be the point of balance of all the objective attentions in the composition. Then move the hands at arms length to this middle point. Then begin spreading the hands till they are no longer seen clearly, to the right and left, or up and down from this middle point. When the hands are separate approximately fifteen degrees, it will be observed that their outlines are no longer distinct. Somewhere in this indefinible border of clear vision the borders of the picture should come. If this spread does not include all the objects and areas desired to re-present, the worker should move back till his view comes within this field of clear definition. Thus the two dimensional extension of the visual pattern to be dealt with in a given representation will be roughly defined.

In Fig. 21 A, B, and C circles are actually exactly the same measure, whereas D is larger. The size effect is however, that C is the smallest, B and D about equal and biggest, and A between D and C. The small effect of C is due to contrast with a large frame, the large effect of B due to contrast with a

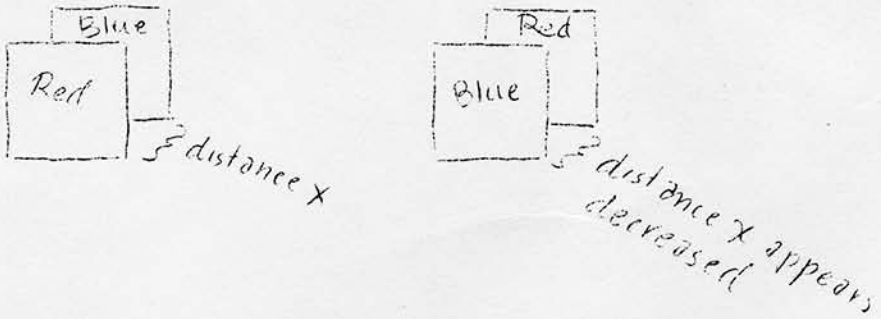
small frame. By delicate manipulation of elements with regard to this principle, the picture surface may be given any size meaning desired, and an inch square present the visual effect of miles of space.

P. When the student begins to draw it is important and desirable that his canvas be placed in such a position that it and the subject matter under observation can be viewed by moving the eyes alone, without moving the body or head. Though later this limitation may be dispensed with, when the effects produced by it are understood, it is at first absolutely necessary in order that the artist gain a clear idea of the effects resulting from his position relative to his subject matter. All rhythms true to a given subject seen from a given position arise from this fixed relationship between observer and object. A change in position means a change in composition, just as does a change in any of the other elements entering into the process of plastic creation, light, form, texture, etc., etc. A fixed position of observation, or the concept of it and a definite middle point are necessary for the accurate observation of spatial rhythms and plastic orders such as are sensitively recorded by Cezanne in Fig. 23. Rhythms and orders not based on a fixed position in space will be false to the real situation. In order to make judgments one must know "where one stands" visually. Since sculpture deals with actual volume, and not the appearance of volume alone, the limitation does not obtain for sculptural drawing, though it is important that the sculptor understand the difference between his drawing and that of the painter.

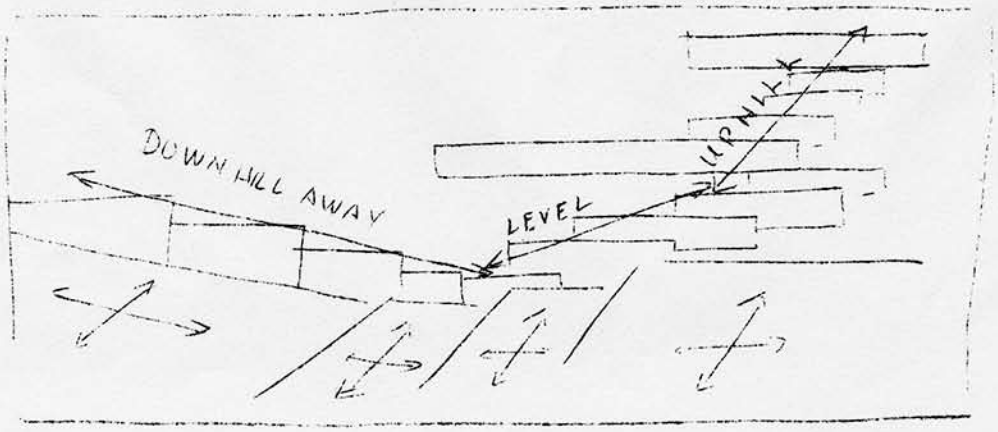
Q. Color of planes modifies apparent size effect. Those colors reflecting most light to the eye, those more intense, will tend to expand in appearance and their effect in the visual pattern will be as larger planes than they actually are. This color expansion effect must be given its due, for the color is one of the characteristics of any particular form and color effects are part of total reality. Thus a bright red plane will encroach on the shape of an adjacent blue or grey plane which does not reflect so much light to the eye. If this modification of form is not observed, the finished painting will lack the living light effect, will be a colored drawing only and not a true painting. Because of the weakness in intensity of pigments as compared to actual light, these expansion effects of planes must be emphasized rather than minimized if the painting is to have the full power of the light effect of nature. Fig. 22. shows the change of the actual silhouette (line a, b) when color force is expressed in drawing. Thus brilliance may be symbolized in black white media.



R. In conclusion: Every element, that is every plane of pigment entering into a pictorial composition or a design must be considered with reference to both its spatial meaning and its pattern meaning. The proper degree of aesthetic detachment may be arrived at by various means; for instance the drawing may eliminate three dimensional symbols, in which case space effects may be introduced by means of color association. But the means which presents the widest range of effects and possibilities is to use the drawing, the disposition of shapes, to give three dimensional effect and to return to pattern with the advancing effect of color. Fig. 23a. Plane Red in front and plane Blue behind is apt to produce the effect of a hole in the wall, unless the red is modified in intensity, whereas in the reverse, with red behind and blue in front the more intense color will return to the two dimensions, while the overlapping effects the third dimension. Thus the proper balance between two and three dimensions may be maintained. This balance corresponds to the balance between Aesthetic Response and Aesthetic detachment and is observable in all great works of plastic art. Fig. 23.



S. In section F the observation of space to the left, right and above and below the eye of the observer is discussed. Some pictures are based upon a simple right hand or left hand space conception. Goya in Fig. 6d uses left hand space. The observer is on a hill. The hill slopes down and away. The direction of the third dimension is implied by the successive overlapping of the planes of the figures, groups organized on planes parallel to the format. But there is the added complexity of the hill side sloping directly away and down. This is made perceptible to the eye by these same overlappings of planes as in Fig. 24.



In Fig. 21A Mantegna uses space almost directly in front of the observer. The overlapping planes of the drapery, stepping back away from the observer are planes in the main directly parallel to the observer. The size relation between the feet and head should be noticed and compared to a photo of a figure in the same position. Whereas the photograph would emphasize the perspective effect upon comparative sizes and thus destroy the picture plane, this picture is perfectly balanced both two and three dimensionally.

In the Fig. 21B Mantegna has used space above the eye level of the observer for the greater part of the compesition. The curves of the hill, if seen from above must have moved in an opposite direction, as it is the context of the picture is convincing and the curve which would ordinarily signify advancing volume, serves as symbol for recession. See Fig. 25.

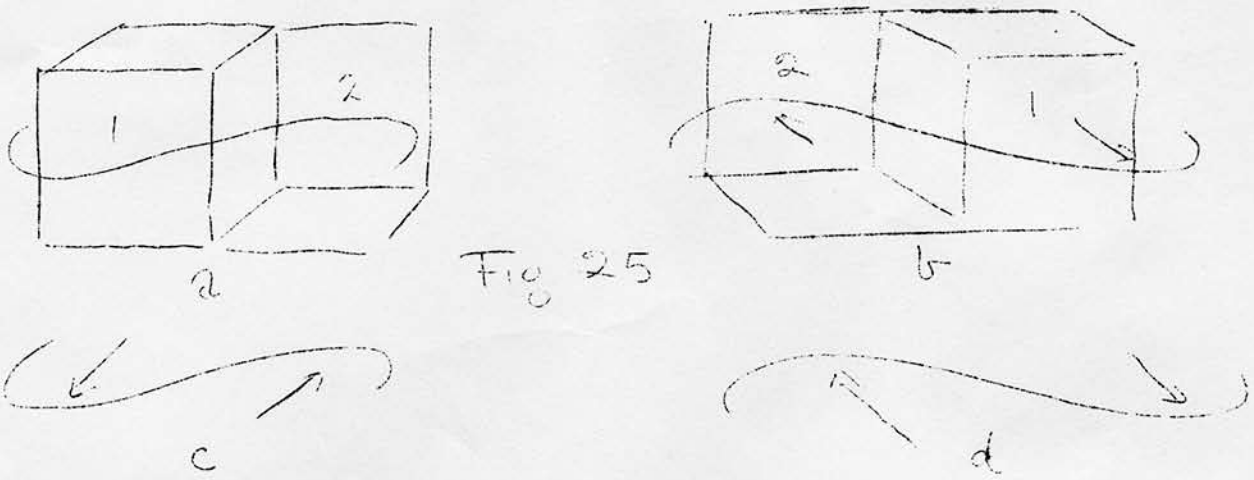


Fig. 25

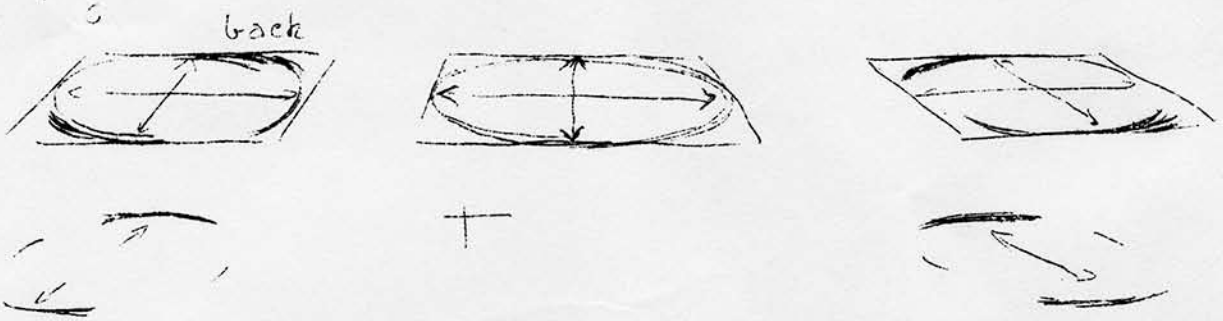
In Fig. 25; Ordinarily habits of vision would lead one to judge 1 as forward and 2 as back. But if by force of imagination the observer is lead to see the figure as from below, the 1 would recede and 2 would advance. This effect only takes place when the picture presents evidence that it is above the eye. Normally such a curve and such a figure will be judged as if 1 were volume and 2 space. In the Rembrandt composition, Fig. 26, the wall to the left would seem to advance if the overlapping of the figures did not force the downward side of it back. See Fig. 26A.

Fig. 26a

A standing alone would be interpreted as if 1 came forward. But with the context of figures overlapping as in B it is caused to reverse.

Tracing the overlappings in the Rembrandt Fig. 6B, From the lower left hand corner to the upper right, and the conditioning of the form of the circular bowl to harmonize with the same space concept leads one to believe that this is conceived as a composition in left hand space. An ellipse seen directly in front of one takes the true mathematical form. See Fig. 26B. But seen from the right as here it is conditioned so that its fore part is over to the left and its back part is over to the right. See also the hat in Fig. 26C. The movement of the apple in the Cezanne Fig. 23 is in accordance with the right hand space concept, as is the silhouette of the vase. The Michelangelo Fig. 16C is seen in right hand space.

Fig 26b



T. Fig. 28, Rembrandt, is an example of light and shade pattern study. Light and shade is to be compared with the river water and the form over which it flows to the river bed. The light and shade planes more often than not negate the third dimensions. Here Rembrandt emphasizes the light shade pattern for its own sake at the expense of the form. The light and dark unities are set down for their own sake. In Fig. 6B, another example of the pattern effect of light dark distribution is shown. It is a well known fact that Rubens, Rembrandt, Giotto and most great masters used dark and light arbitrarily, first to separate planes necessary for the form, and secondarily in the interests of pattern. The orchestration of light and dark planes parallel to the observers in a simple pattern is well evidenced in Fig. 6c, Rembrandt.

Fig. 29, is a photograph taken from miles above the earth. The unusual position of the observer prevents him from correctly interpreting the bumps and holes. It is not until the river beds are distinguished that the valleys are differentiated from the mountains. Indeed, even after this is known, the mind often gets a reverse effect. The camera is unable to add plastic knowledge to a dark light pattern. Unless one establishes the direction of the light, the hills become hollows and vice versa. So it is with a drawing that is no more than a copy of accidental light and shade. The only way to prevent volumes in pictures from occasionally reversing and

becoming spaces, is to subordinate their movements and relations and those of the planes which make them up to plastic knowledge, expressed on the basis of the observers position. See Paragraph S.

U. As one removes step by step from the limitations of real experience in vision and in plastic form, the picture tends to become more and more a flat pattern. The experiments of certain of the Cubists have resulted in flat pattern, where the only parallel to actual experience with space which remains is the principle of overlapping planes. Here one moves into the realm of the abstract, where symbols are often as arbitrary as are written musical notes and mathematical symbols. Fig. 15A (Kandinsky) presants such an abstraction. It is not the purpose of this short statement to deal with such abstractions but only to build the bridge from ordinary experience into the pictorial world. Nature exists in three dimensional extension and the picture in two dimensional extension. The process of making pictures is a translation ffrom one language to another. Abstract paintings can be likened to statements of philosphic epigrams and axioms. They are not simplifications which leave out, but are condensations, as the matter of a page or paragraph may be summed up by the genius in an epigram without losing the essential meaning. As few people understand epigrams as understand abstractions. Art uses selective emphasis to condense and intensify expression. But sincere study and preparation must precede the appreciation of these difficult beauties. Neither Bach nor Picasso are savages, nor can they be come at without conscious or unconscious training in their appreciation To expect of painting that its most secret beauties can be come at by the unsophisticated mind is to subject it to a limitation that no other art is cursed by. The statement of the universal is not necessarily understood by the untrained.