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SPATIAL DYNAMICS IN PAINTING ACHIEVED "THROUGH PLANE MANIPULATION

Ву

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SPATIAL DYNAMICS IN PAINTING ACHIEVED THROUGH PLANE MANIPULATION

Introduction

In order to understand the thesis, a clear definition of terms is necessary. The idea of space as considered by the artist may consist of two concepts. One might deal with the greatly expanded space revealed in our contemporary action and thought. The other is definitely limited to the painting surface, whereon a small segment of a world, imagined or real, may be presented; or, the immensity of a universe boldly suggested. The modern painter can use pure space of controlled size (the painting surface), to create space of vast dimensions if he chooses. Or, as one critic, Aaron Berkman, says, "The canvas, too, is space. Within itself it is infinite; and the painter is a creator in the picture-space universe."

Consider the word <u>dynamics</u> as defined by the <u>New Standard</u>

<u>Dictionary</u>, which states: "Dynamics: The forces producing or governing activity or movement of any kind; also the methods of such activity."²

This idea of motion as the result of force, may be applied to painting where lines and forms are forced by the artist to

¹ Aron Berkman, Art and Space, (New York, Social Sciences Pub. Inc., 1949), p. 14.

2 New Standard Dictionary of the English Language, (New York and London, Funk and Wagnalls Co., 1947), p. 777.

effect movement in his design. Also, by placement of these elements within the space of the picture-plane, the eye of the spectator is <u>forced</u> or compelled to move about within the area of the painting.

A plane may be defined as an enclosure of space by line.

It is a facet, too, of a form having three dimensions, for a

form of two dimensions becomes again a plane.

In the case of areas of several different values or colors, the joining of one value or color with another creates a line. Pure line, or the line dividing values or colors, or a combination, may all exist as space enclosure, thus defining planes in a composition.

The meaning of the term manipulation, according to the same dictionary is: "Manipulation: The act or process of manipulating, especially, nice or skillful use of the hands." Certainly skill, as well as knowledge and technique, is employed by the artist, who must work with skillful hands at particular points in the development of his paintings. But also, there is a necessity for skillful and precise placement of forms, lines, colors and textures, to achieve a unified whole of beauty and meaning -- a finished work of art.

This act of manipulation is first, either consciously or unconsciously, developed in the painter's mind, and is then materialized in physical action, with the use of various media and techniques, upon the painting surface.

New York and London, Funk and Wagnalls Co., 1947), p. 1506.

This, then, is a study of the use of planes to create an illusion of movement in drawing and painting. The pursuit of this study leads back to the very beginnings of art and traces a growing consciousness of space-creation through the art of all mankind. Here and there is found the principle of plane manipulation employed in the organization of the picture-plane surface, to produce an illusion of movement in spatial depth. In certain periods, this principle of careful adjustment of planes for compositional values was utilized to a much greater extent than in others. At times it even seemed to be entirely lost to art. But the approach to the complex world of modern art increasingly shows how very important it has become in highly abstract and non-objective painting.

Obviously, it is necessary to have a profound knowledge of significant phases of our contemporary world in order more intelligently to approach various interpretive paintings and other works by modern artists.

It is my desire to show clearly some of this relationship between two worlds in existence today: the world of all natural being, and the artists' world of interpretive and imaginative expression.

It is also my intention, in this paper, to give a brief account of personal growth in understanding and creating modern space-art, out of a background of rigid academic training.

This will enable me better to present and explain my own thesis compositions, which will take the form of various types of

movements, achieved through plane manipulation within the pictureplane field.

There are three phases to this presentation.

- 1. A dictionary of movement.
- 2. Compositional studies.
- 3. Paintings.

Among the purposes of this study then, are: the creation of a great number of different forms and phases of movement in drawings and paintings; the observation of the effects of overlapping or slipped planes off fixed forms; the recording of some of the results in pictorial patterns; and also, the study of varying sensations produced by the use of transparent, semi-opaque and opaque planes in the painter's art.

In my thesis interpretations of these drawings and paintings, I shall endeavor to make clear some of the specific methods I have employed in my particular use of planes, as well as other elements of design, to produce the sensation of movement for the beholder.

Chapter I

FROM THE DAWN OF SPACE-CONSCIOUSNESS TO THE PRESENT IN THE PAINTER'S ART

An examination of the art of the cave man indicates that a primary concern of the primitive artist was to produce symbols, which through magic, would aid in the success of the hunt. But, as he used the almost unlimited space of the cave walls, was he not also unconsciously revealing pictorial space as he created what Berkman has called "images floating unconditionally upon the two-dimensional wall he was decorating"?

Some of these image-forms, however, are related to each other in their organization upon the wall picture-field, by the technique of overlapping planes, which gives a definite effect of spatial depth.

A notable example of this is to be seen in a photograph in Ray Bether's book² with the subject -- Cave Painting: Mammoths, Cavern at Font-de-Guame.

In this remarkable rhythmic and alive design it is noted that the artist has utilized transparent to opaque overlapping forms, slipped and expanding planes, and a wonderful repetition

lBerkman, op. cit., p. 17.

2Bethers, Pictures, Painters and You, (New York,
London, Pitman Pub. Corp., 1948), p. 7. Cave Painting:

Mammoths, Cavern at Fond-de-Guame, (Photograph, courtesy

American Museum of Natural History).

of undulating contours, all of which produce an illusion of movement and depth in space. The suggestion of the third dimension is heightened by the diminished size of some of the animals which are evident partly outside, and partly within, the transparent planes of the larger animal forms.

We marvel at the great talent displayed by this early primitive; both in his skillful delineation of form and bulk, and his accomplished use of the principle of plane manipulation to effect movement and a feeling of limited depth in the picture area.

In our delight over his mastery of a spatial problem, we can but wonder if the creator of this painting experienced a feeling of aesthetic joy over the beauty of the pictorial result, akin to our own, some twenty thousand years later in the history of man and his art.

A further example of presenting a sense of space in primitive art is to be seen in the rock paintings of the African Bushmen. In these, as Sheldon Cheney has remarked, a sense of space is achieved in the convention of diminishing sizes of animal and human forms within the area of a single painting. Here also, may be noted the existence of overlapping planes.

Again, on an eagle bone discovered in the Magdalenian

Deposits, Teyjat, Spain, as Raymond E. Stites² has pointed out,

the engraved lines represent a great herd of animals in some

¹Cheney, World History of Art, (New York, The Viking Press, 1937).
2Stites, The Arts and Man, (New York, London, Whittlesay House, McGraw-Hill Book Co., Inc., 1940), p. 44.

spatial depth. Perhaps the skilled carver was dimly aware of the space he created by his use of slipped, transparent planes, expressing in a masterful way, a vast number of reindeer.

The art of Persia, Assyria, Babylonia and Egypt reveals the use of overlapping planes; although it was largely a two-dimensional art expression, with the exception of low-relief carving. The Egyptians attempted space organization, suggests Aaron Berkman, "by placing their forms and figures on a ground line. The only way they indicated depth was by figures in front blotting out parts of those farther back." He further states that "incidents are depicted by a series of figures and objects placed in sequence on the same wall, thereby indicating space and movement within a definite period of time."

This vertical space-design is to be found, also, in early Christian and Byzantine art, although its symbolic meaning was different from that of the Egyptians. For the medieval artist ignored the horizontal (the earth) in his aspiration heavenward. Mystic art of this kind, Mr. Berkman says, "reaches into that rarified realm of unbounded space where the mind contemplates eternity and treats form abstractly, as symbols of the spirit."3

Oriental artists used the principle of the cube for an illusion of space. The front plane of the cube became the picture-plane. Movement back into space was arrived at by means of planes

Berkman, op. cit. p. 17.

³Tbid. p. 20.

placed diagonally and overlapping each other. In prints and paintings having architectural features, parallel lines and planes of recession were often widened gradually as they progressed diagonally back into the depth of the picture. This device, a reverse of optical perspective, gave a feeling of greater spaciousness. Chinese landscape painters used space to portray the insignificance of man in his contemplation of the universe. They created overlapping forms in the midst of great emptiness.

The painters of the early Renaissance, such as Duccio, Giotto and Massacio used overlapping planes in relatively shallow three-dimensional depth. They lived and worked in a transitional period, between the spiritual expression of Byzantine and early Christian art, and the more temporal and humanistic influence of the late Renaissance. During this period figures became more natural, were grouped in overlapping forms, and were increasingly inter-related with each other and with the background. Later, with the discoveries of perspective, pictorial space became very deep and served as an arena in which to display the worldly life of man.

One great difficulty, however, with the developed Renaissance perspective, was that it had a tendency to lead the eye out of the picture with little chance to return. When carefully controlled by a master designer, this was not the case. Some artists, notably Leonardo da Vinci, were so concerned with the representation of greater space, than was possible with ordinary

perspective, that they invented and employed multiple perspective. This principle used several different vanishing points. It has reappeared many times in the plastic art of all ages following the Renaissance.

Along with the stable, familiar, and sometimes unimaginative academic art of several generations following the brilliance of the Renaissance, there were fresh methods of space organization being tried by certain original thinkers. Of these, Cezanne was the first to see with multiple and facet vision.

He discovered that the eyes see one object at a time, and only focus upon particular points of that object. They perceive roundness in a series of individual views, and more correctly than the camera. Also, he knew that an object close at hand appears as a double image when the eyes are focused beyond it. The idea of these separate facets of vision fascinated this creative and original artist. He selected facets of objects he saw in nature, and abstracted them into planes.

These he reassembled and placed for movement in a dynamic pictorial order, where they became forces, which together and within themselves contained rhythm and harmony -- the ordered language of the universe. Cezanne was excited by the color of form in space. He used pure prismatic color in planes to model form, and express volume and space.

All of these innovations were important contributions to modern space organization. Thus Cezanne brought a new approach to the art heritage of the past, and foretold future developments by his own experiments.

Picasso, Braque, Juan Gris, among the cubist experimenters, were eager disciples of Cezanne.

But what has cubism to do with our study of spatial dynamics? There is a definite relation to the subject, for it deals with the breakdown of natural forms into abstract, angular planes. These are then moved freely about and finally so placed in the composition as to bring a feeling of tension and movement to the whole.

The cubists were interested in new pictorial organization, and refused to mirror life. They wished to bring into relief new concepts of the reality of the visible world. Their problem was to present multiple space-relationships on a flat plane surface. In their various solutions they employed overlapping planes seen from many different viewpoints.

The picture plane, to them, was not only a point of departure into depth, but also a surface to be ornamented.

Under their mode of attack, the external aspect of the object disappeared and became only slightly recognizable by tactile surface characteristics which were sometimes retained, and became valuable as texture to enforce movement. Beauty of form in shape and color was for the cubists a primary aesthetic interest.

Dr. Felix Ibanez, in his study of modern art, states: "All through history scientific truth has influenced artistic thought, and vice-versa. The artist does not, of necessity, deliberately reflect scientific truth in his art, but if the climate

of an age is saturated with new ideas, the artist -- the most sensitive barometer there is -- reflects those ideas in his work. "I Referring to evolution in art as it parallels that in science, since the revolt aginst classicism, Dr. Ibanez presents his theory analysis. He says, "This evolution in art runs parallel with the evolution of physics, which passed from investigating things by naturalistic observation to studying the perceptions of things and ended up by analyzing their ideological scheme." In a more direct comparison to cubism, he remarks that it was for artist and scientist alike a displacement of the angle from which each viewed the universe -- a progression from external reality to subjectivity.

There have been experiments in creating an illusion of movement by the use of slipped and overlapping planes. Some have been more literal than others. A literal approach was made by the Italian Futurist painter, Giacomo Balla. His "Dog on Leash," 1912, employs regularly spaced lines, representing transparent, overlapping planes of movement progressing in rhythmic sequence out into space, either fanwise or more parallel to the object represented to be in motion. The method was not too successful, as it produced a somewhat static effect. Subsequent paintings by this artist achieved more completely the desired result.

lbanez, "Psychodynamics of Modern Art," Arts and Architecture, (Los Angeles, California, John D. Entenza, Vol. 70, No. 2, Feb. 1953), p. 18.

2 Ibid., p. 19.

A second step in the progression of art toward abstract form movement in space was taken when an attempt was made "to fuse different positions of the object by filling out the pathway of their movement. "1 . An example of this step is seen in the painting, "The Early Bird," 1919, by E. McKnight-Kauffer.2

In the third step, the cubist analysis of space was synchronized with the lines of forces, depicting movement of planetary forms in space, abstracted from the object. Marcel Duchamp's "Nude Descending the Stairs," 1912, is a characteristic example.

One of the more abstract experiments, indirectly related to cubism, is seen in Metzinger's "Bicycle Race," where the relevant facts of a race become facets of form, symbolized in lines, planes, colors and textures, "where they function as the embodiment of all that is happening at the moment, (simultaneity) and as elements which decorate the picture surface design. "3

The non-objective artist did not derive his forms from the factual world. Hence the ground plane was of no importance to him, for his mind was concerned with a contemplation of universal space. He constructed his painting parallel to the picture plane with more or less feeling of movement into depth.

Historically, Kandinsky is the most important exponent of this approach. On a flat canvas surface of limitless space, he

Berkman, op. cit., p. 160.

¹ Kepes, Language of Vision, (Chicago, Paul Theobald, Pub., 21947), p. 178. 21bid., p. 183.

orchestrated the elements of his compositions like musical instruments in a symphony of many and varied harmonious relationships. This required a free, spontaneous art expression through the medium of overlapping, interpenetrating planes. It is believed that it was he who initiated the principle of "inner necessity," in which forms chosen, and their relationships to each other and to the whole, became a personal revelation of man's inner world. Kandinsky's art, with its expanding, growing forms, has a living, organic quality about it, which stimulates the soul like great music.

Survage is another artist whose visual expressions have much in common with the subject-content of our thesis study. He employed the method of axis grouping of objects on a canvas, to give a sensation of depth in space. As others before him had discovered, he knew that angular lines and planes give a positive feeling of three-dimensional recession back from the flat surface of the picture plane. Survage also saw that these angular planes could be grouped about a central axis of the chosen object in a dynamic manner, without imitating the foreshortening necessary to optical perspective. This original and intuitive thinker believed, like Kandinsky, in spiritual origin of his art. Survage himself said, "Art is, then, always a synthesis, that is to say, a creation of our spirit." However, he was not purely non-objective in his approach. He used subject matter of very personal symbolic meaning as a starting

Problem in Painting, (New York, Cavici, Friede, 1929), p. 141.

point for his abstract expression in a rhythmic spatial art.

To enrich and humanize the surface of his paintings, his

planes in space were partially peopled with objects or details

of objects. This use of texture also contributed to the movement into depth of his compositions.

As modern art is approached we find a growing number of what the critics are pleased to label "schools of art expression." It will be helpful to isolate to some degree the work and representatives of these "schools." Dr. Ibanez has suggested the following classification for abstract art.

Representation of:

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- abstract geometrical form.
 (like Bach fugues.)
 Mondrian and his visual mathematics.
- stylized geometrical object representation.
 (vertical and horizontal lines used to represent the essence of objects. Schematic form.)

Fernand Leger, Archipenko, LeCorbusier.

- 3. abstract organic forms. (forms to suggest life and living things.) (figures of fluid contour.) Joan Miro, Noguchi, Jean Arp, Calder.
- 4. stylized organic forms.
 (organic form applied to the image to give things the fluidity of form -- symbols

similar to the natural species from which they evolved, but with their own laws of development. Sometimes a wandering line or figure created from aimless lines.)

Miro, Henry Moore, Picasso, Klee.

The writer believes the above representation will be of value in helping to explain personal thesis compositional attempts at achieving spatial dynamics in painting.

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In this brief account there has been an examination of growing space consciousness through the ages of man's expressions in art.

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libanez, op. cit. p. 36.

PERSONAL GROWTH IN SPACE-CONSCIOUSNESS

The author now turns to a summary of personal growth in understanding the meaning of spatial dynamics in painting. In this story it will become clear how the writer's own modern art expression has evolved out of an academic background of art training.

For the natural artist there was a boyhood delight in the beauty of abstract pattern and pure form seen in cast shadows, tree silhouettes, cloud forms, small objects of nature such as stones and shells, and effects of illumination at night.

As a deterrent to creativity, however, naturalism was stressed in the early experience of the embryonic artist.

Fairy tales, myths and legends might be imaginative, and illustrations for them original; but it was not permissable for the art of the painter on canvas to be anything but pictorial and realistic.

Later, came a period of academic training in art schools. At the outset there is recognition that there are definite values in such training.

The eye was taught to see, and the mind to perceive, more and more accurately, the visible objects at hand. The hand became skillful in recording the natural appearance of form. Distortion and abstraction of objects represented on the painting surface was in general discouraged.

In the study of the history of art, the contributions of

Cezanne and others among the forerunners of modern art were presented. Curiously enough, there was little carry-over to students in their painting classes, and small encouragement to do fresh, original work. All of this experience did little to increase the power of emotional expression. It had much to contribute towards a general atrophy of imaginative conception.

Then, through a continuous association with, and practice in, some of the methods employed by modern painters, the writer began a gradual emancipation from a too-rigid academic training. New delight in abstract art forms and their possibilities for creating exciting organizations in space grew rapidly.

In former years the author had often wondered why original sketches were frequently more imaginative and dynamic than finished academic paintings. The answer is found in the observable fact that conformity to absolute rightness, and anatomical correctness, destroys the exciting free forms of an emotional expression. There was a refreshing inventiveness in the spontaneous sketches, which was sometimes entirely absent from the paintings. Every creative artist who develops his sketches into a carefully finished painting faces the problem of retaining the freshness of the original conception in the final result. Some artists paint directly on the canvas, organizing and re-organizing the elements of spatial design, as they bring the whole composition through many changes in visual appearance, to a completion of aesthetic perfection or near-perfection. There is validity

for an artist in both methods of approach to a painting. Sometimes one method is better suited to the development of a particular idea or emotion than the other. The author has used the developmental-sketch method more frequently than the direct attack. A need is now felt for more spontaneity in developing paintings, from the initial idea to the finished work. Also, there is a very real desire to experiment, using new materials and techniques for art expression. At the present moment, the writer is in a definite period of personal growth in spaceconsciousness and creation, which easily can last a lifetime.

Chapter II

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OUR CONTEMPORARY WORLD AND SPATIAL DYNAMICS IN PAINTING

This is the final chapter in a brief survey of mankind's growing concern through the ages for an adequate space-solution in two-dimensional art expression. (The author is fully aware that this summary is incomplete in not presenting the works of each and every painter concerned.)

In his many and greatly varied approaches to this problem-enforced by a growing art heritage--there has been evident an
increasing facility on the part of the artist, in its successful
solution, in his day.

Now it is time to turn to the present and consider some of the elements which most clearly characterize our contemporary society, and the art which is influenced by it. The old fixedobject concept in the art of the past is gone from our new, dynamic expression in art.

Hitherto unexplored areas of thought and feeling have brought discoveries and new frontiers, both in physical and emotional realms. These, together with fresh concepts and new forms and elements, have all contributed to make of modern living a complicated and many-faceted reality.

"Motion-picture vision" (a term suggested by Kepes) brings

^{1&}lt;sub>Kepes</sub>, <u>Language of Vision</u>, (Chicago, Paul Theobald, 1947), p. 176.

an "optical turmoil" in which man is faced with a constant and high-velocity bombardment of visual facts.

New ideas and elements of life constantly and insistently impinging on humanity bring either the possibility of mental confusion, or an exhilerating sense of stimulation for those whose minds and spirits are rightly attuned to the modern rhythms.

Space travel by man in our generation has opened out vast, unlimited horizons. And, in a steady contemplation of the universe and ultimate reality, the mind of man has gone far beyond sensory experience. This is likewise true in the most recent discoveries of science.

Rapidly growing and expanding methods of communication have increased man's knowledge and experience to an amazing degree.

As in modern life, so too in contemporary art expression, there is a great diversity, which is not at all completely catalogued in the concept "schools of art."

This wide diversity is necessary to encompass thoroughly an art interpretation of our times. For as Survage has implied, true art is an accurate reflection of the rhythms of its own age, as well as the universal rhythms caught by the individual artist. The expressive, visual interpretation of the artist may spring either from conscious objectivity, or out of the depth of the subconscious. It must be conceded that all creative art activity is to a greater or lesser degree subjective. For

¹Kepes, op. cit.
2Putnam, op. cit., p. 143.

termed 'elevation of mind' (élévation d'esprit), will always be the source of all exalted preoccupation, even though it be a hidden source, visible solely through intentions and the results attained. "I Paul Klee has spoken of "the rebirth of nature in art." And Carola Giedion-Welcker, enlarging on his theories, writes: "Again and again it is not the forms of the visible world which are crucial but those discoveries we make of a deeper life and broader regions of being when we return to the ultimate sources and formative powers of nature. And it is from this deeper perception that the artist derives the inspiration for his interpretative language of symbols."

Today, art functions to portray life, and there is a new freedom of expression, as man's mind and spirit are continually expanding.

Just as science has found new symbols to interpret recent discoveries, so art is seeking new elements with which to express these present realities of modern life.

Life is never static, for there is an ever-changing order of relationships. A modern painting, then, must contain a sense of dynamic order and harmony of rhythm in its spatial organization.

Kepes has remarked that "dynamic inter-relationships and interpenetration which are significant of every advanced scientific understanding of today, are intrinsic idioms of the

¹Putnam, op. cit., p. 143.
2Giedion-Welcker, Paul Klee, (New York, Viking, 1952), p. 61

contemporary vehicles of visual communication." This is reflected in the work of some modern painters, in their dynamic use of planes in space, where lines and shapes are interrelated and interpenetrated with each other within the area of the picture-plane field.

As a partial demonstration of the complexity and variety of contemporary art expression, the author turns for a moment to the work of visiting artists during the 1953 Arts Forum at Women's College. All four exhibiting artists are non-objective painters, yet each had an entirely different approach from the other.

One man painted boldly and rapidly with liquid paint. He was a rather quiet person who revealed his true inner self in his power of conception and strength of color.

Another built his abstract color forms slowly and with nervous brush strokes on the large square canvases. He spoke of being fascinated with the developing thickness and vibration of his "muddy" color, and then of feeling unhappy over the result. He resolved his gloom with a touch or two of pure bright color, and thus found an exciting unity he did not expect, and called it good.

A third painter used bold wide black bands of oil paint against a white ground. He employed black as a color or colors. He remarked that the last time he had used color as color, he

¹Kepes, op. cit., p. 13.

did not like the effect and painted out the yellow and red with black. Then he liked it better.

The fourth artist seemed to be more inspired by specific objective experiences. One abstraction done in free-flowing bands of yellows, reds and blues was his interpretation of the music of a German brass band. Another oil in greens, greys and blacks, sinuously interwoven, expressed his subjective experience in a deep green wood.

All four painters agreed that they used imagery which fascinated them, but which they did not quite understand.

"Vision in Flux" reveals an experiment in spatial dynamics by the artist Hugo Weber. This fresh solution of the problem of space is achieved through the use of paintings on masonite, hanging free for turning on their vertical axes, which appeared in an exhibition. The paintings on each side are varied in form. As Mr. Weber says, "The form remains open-pictorial, the structure -- fluid." The artist further states, "The paintings are evocative projections, not abstractions. A linear key figure travels through space -- multiplies -- alters its speed -- goes in and out of focus -- loses itself in movement of lines often complex in their patterns. The paintings are essentially variations on a theme."

¹ Hugo Weber, "Vision in Flux," Arts and Architecture. (Los Angeles, California, John D. Entenza, vol 69, No. 3, March, 1952), p. 32.

³ Ibid.

From the few examples given in this writing, some notion, however incomplete, is gained, of the great diversity which exists in the creative work of modern painters.

While there is much more that might be written about the inter-relationship of contemporary art and our world today, a consideration of the idea, and plastic reality, of spatial movement in painting is now proposed.

CHAPTER III

SOME APPROACHES TO THE SOLUTION OF MOVEMENT IN SPACE

The artist, using plastic means, effects movement upon the picture-plane surface, by his manipulation, or careful placing, of the elements of composition, for aesthetic rightness.

Among these elements are planes, which have various inherent qualities.

It was noted in the beginning that a plane may be defined as space, circumscribed by a line. A plane may likewise be any shape or dimension. Also, this facet of space may be an area of tone or color; transparent, semi-opaque, or opaque. This area is often varied by the artist, using gradation of tone, or applying different effects of texture. The plane may appear as warped, twisted, bent or pierced.

Again, it may occur as an incomplete, partially disintegrated form. Two and more planes in a space organization sometimes intersect each other, and thus create dynamic tensions.

It is the author's purpose, at this point, to consider a number of possible relations of planes to each other and to other elements in a composition.

Transparent planes, when overlapping each other or other forms in a painting produce a sensation of surface movement,

as well as movement into depth. This can result no matter what diversity of shape exists between these planes themselves, and entirely dissimilar forms.

The degree of transparency may vary, and range from colorless purity to lightly, or more deeply colored areas. It is even possible to approach very near to transparency with the color of black. These transparent forms can occur in connection with either a flat, quiet ground, or an arrangement of lively, vibrating colors. Also, they might interpenetrate with other forms and colors. Contrasting colors give greater tension to overlapping planes than those which are simply harmonious. A strong contrast of values likewise aids movement into depth.

Similar effects are obtained with semi-opaque planes.

And, of course, either transparent or semi-opaque shapes can satisfactorily overlap purely opaque forms to give movement within the picture-plane area.

Planes may be slipped off, and away from, more or less stable forms, which have been rightly placed for good pictorial design. This sliding away of planes increases the effect of movement. These slipped forms become new compositional elements. They range from pure transparency (with boundaries barely suggested), through various degrees of semitransparency, to solidly opaque objects. Color and value variation can be almost unlimited.

Or, instead of moving off solidly stable forms, planes may slip by each other in any number desired by the artist. They may progress in regular rhythm, sidewise, up or down, diagonally, or in a fanwise direction of movement.

Slipped planes might move off a solid form in a number of different ways. Only one plane could slip away from the parent form; or many might fold or curl away, as petals from the center of a flower.

Planes can be so manipulated as to appear to be either sliding forward, out, or backward into depth of space.

The possibilities, both for aesthetic pleasure in movement, and for the achievement of space organization, are limited when mechanically slipped planes (exact form repeated by stencil or tracing method) are employed.

On the other hand, there seems no limit to invention in created (drawn freely) slipped planes.

Slipped planes of objects can evolve gradually-either slowly or more quickly-or suddenly in an explosion of form to create new forms.

In place of being slipped, in any of the many ways we have examined, planes of like proportions might be staggered to give a sensation of movement.

Shapes, distorted slightly, or to a great extent by projections, are useful; for these irregularities indicate or point out direction of movement in space.

Movement by expanding, increasing (or growing), versus contracting (withdrawing), reducing has already been suggested.

There is movement of steady progression, by means of regular gradation of planes adjacent to each other.

The horizontal directions might mean outward pushing, and the vertical, downward plunging or upward reaching. The diagonal can be movement expressing great action, or agitation and instability.

Spiralling could be up or down, or in and out.

Circular movement gives a possibility for the sensation of whirling, or again may be more static in effect. (Although, of course, even the slightest hint of movement immediately negates a purely static state.)

Conversely, it immediately is apparent that the smallest movement is important to give life to a painting.

Movement may be accomplished solely through contrasting values, colors or textures.

Considering textures: when applied uniformly, it tends to make planes move forward in space. While in the case of partial use of texture, that part of the area on which it appears moves ahead of the plain portion. This may produce a warping or twisting effect on the plane.

The use of zigzag lines or planes gives movement.

One direction of movement may cross over another and create tension between them.

Expansion of a form can result from movement of planes about that form.

Planes expanding above a small form gradually produce a larger and larger canopy above that form. While planes expanding out in all directions from a central object can create an enclosure of hollow forms.

When expansion is equal on every side, the resulting forms appear unmoving and static in space. A slight increase on one or two sides immediately gives the effect of movement which is most active toward the place of greatest expansion.

It follows that specific use of plane manipulation may also cause a given form to contract.

Placement of a form, say a triangle, shows or indicates direction of movement in space. Slipped planes off that form emphasize direction of movement. This emphasis may be very insistent, or, these planes as they progress away from the object, may gradually or suddenly alter the direction of movement, giving it ultimately an entirely new direction.

Some other opposites possible in movement through plane manipulation are as follows:

continuous, steadily progressive, regularly changing, smooth, or broken, accented (uneven or even) tick-tock motion.

simple -- melodic versus slow, steady, plodding (maybe monotonous.)

minor, small (barely perceptible), quiet, versus major, big, explosive, loud.

approaching versus receding (maybe pendulum, or swinging action.)

Arrows or other pointed forms indicate direction of movement; and when repeated in regular sequence, they give insistence to that direction.

In case several different forms appear in the same picture, the method of plane manipulation, for creating spatial dynamics, should be carefully controlled. It should be limited in many designs, so that not all forms are included in this movement of planes. This tends to avoid monotony, and creates a more successful aesthetic solution of space.

Truly creative artists in all ages have been experimenters. Innovations they have discovered have frequently led to new art forms. Plane manipulation for the writer is largely in the nature of an experiment. There is expectant hope that space organizations of merit may be produced, using various approaches in this technique.

The author accompanies this writing with a graphic dictionary of movement.

PRESENTING A GRAPHIC DICTIONARY OF MOVEMENT

This consists of a series of drawings made to make more vivid, ideas on movement through plane manipulation, as already suggested in the thesis. These drawings are varied as to size and technical means employed to produce them.

COMPOSITIONAL STUDIES

These are complete spatial organizations in line and shape, produced in a variety of media and techniques. They further illustrate ideas presented in the thesis. Also, apart from the paintings, they exist in their own right as original conceptions. Among the technical methods used to create them are pencil and crayon, pen and ink, brush and ink, scratch-board, stencil, and colored paper.

An enumeration and supplementary description of these studies follows: Window In The Night, and Wing Pattern are both done on scratch-board. Mobile Patterns is a pen and ink drawing on a blue caesin ground. It suggests the movement of planes in space, and also, in some instances, their transformation into similar, or dis-similar shapes.

PAINTINGS

Red Triangle: An Arrangement

Although this painting in caesin is not the first one conceived for my thesis study, I consider it the most elemental in its use of slipped planes off solid forms. It employs the principle of double, or multiple vision. This can be explained as follows: When you finger vertically before your eyes and focus your vision beyond it, you see a double image of your finger. If you hold your hand in like manner, the second semitransparent image appears on either side of the more solid central form. But in visual appearance this central form itself, actually seems to have only a small central core of opacity. Now when you look at your finger held in the vertical position again, but with your head tilted to one side, the second semi-transparent image appears to rise with your eye as you tilt your head more and more acutely. I used this further principle of multiple vision in my slipped planes in this painting. The diagonal directional placement of the secondary red and blue transparent and semitransparent forms, gives a sensation of dynamic movement in space. The pale red planes are actually opaque when seen against the lighter blue shapes. In order to create a less rigid and limited space-pattern, I varied the shape and size of the slipped forms, slightly, rather than have an exact stencil-type of reproduction. Considerable spatial depth has been created in this carefully controlled arrangement.

Primitive Patterns

Primitive Patterns is a watercolor with pen and ink symbols on a white caesin ground. The dominant principle of spatial dynamics is seen in the horizontally staggered planes. Polychrome color on the narrow rectangular forms avoids monotony and gives slight movement into depth. Because these color shapes, enclosed by solid black lines, are placed against a pure white ground; vibrating movement is felt, also, on the picture-plane surface. A second application of plane slippage off solid form appears in the black-tipped arrow symbols drawn in pen and ink on the painted bands or belts. Repetition of the arrow head in regular sequence gives insistence to the direction of movement indicated.

The origin of this design will be of interest. There is in the pen and ink characters, obvious evidence of research in various types of primitive symbolic forms. The idea for the spatial organization, however, came from a very contemporary source. While revising the index for a map, I had before me a number of small white rectangles with letters in black near the center of each. When placing them in regular order, and then idly staggering them slightly by pushing some to one side of a central axis, and a few to the other side, the idea for this painting suddenly came to me. It was then developed from several small "thumb-nail" sketches.

Jungle Moon

Jungle Moon began as a purely non-objective caesin color-pattern painted on a celotex panel coated with a white Kem-Tone ground. The initial colors were strong, and shouted too loudly; clamoring for individual attention. This dis-unity was resolved quickly by a thin wash of transparent turquoise blue over the entire picture surface. The forms emerged slowly then, in new subdued color patterns as I added color and black in areas for lines of accent. The original idea was to portray slipped and expanding planes about specific forms. Texture for movement and interest was developed by scratching and piercing the painted surface with a steel point. A need was felt for a central dominant motif of different shape and color, so the orange moon was added, by stippling the color on with a brush. Above this central circular shape there is a growing canopy of expanding angular forms in contrasting colors. Also, throughout the design of the total picture -- space, slipped planes can be observed. In places this regular repetition of line and pattern is quite obvious, while in other areas it is barely discernible. The mysterious, exotic mood of the finished painting determined the name, Jungle Moon.

Looking Glass

Looking Glass is a water-color wash painting made with transparent colors on a white caesin ground. The shapes were outlined with a black-ink pen line after a few washes had been applied, and the pencil lines were nearly obliterated. In the finished painting these thin black lines give an effect similar to the edge seen on a piece of transparent colored glass. The final result, both of the lines and the overlapping transparent forms and their specific arrangement, furnished the title for the painting. The idea, as in many of my compositions, was born in a tiny pencil drawing of overlapping transparent shapes. These shapes, and their relationships to each other as they were developed in the full-size line drawing, were exciting to me. This excitement grew as I applied the many thin washes and observed new color patterns emerging and receding in the picture area. There is in the painting a contrast between the geometric and organic shapes. The central transparent blue glass-like shape with straight-line boundaries stands forth in a light tone, because of repeated surrounding washes of darker, greyer colors. This particular shape, because of diagonal directions of bounding lines appears dynamically warped and twisted in space. There are evident, too, in the painting certain expanding organic forms. The transparent overlapping color planes create, too, a sense of equivocal space where one plane appears both to press forward, and to recede into depth of space at the same moment of observation.

Reflections On Reflections

In a store window I saw a beautiful large, flat silver tray, supported in a vertical position. On this round, highly polished picture surface, I noticed various reflected forms which greatly interested me. Later, I drew a small sketch and added some other forms, which I hoped would give unity and interest to the whole composition. The red and blue rectangle represents the reflection of a passing car. It is carefully placed in its relationship to the whole space organization. The pale gold centrally located vanes falling away fan-wise to the right, are my invention to present a certain type of slipped-plane formation for movement, variety, and aesthetic delight. There are other transparent, overlapping shapes in the painting. It is a water-color done with transparent washes on a celotex board coated with white caesin. Also, a few touches of white have been added to the final picture.

The varied, overlapping, transparent green shapes, coming in toward the center from the four sides of the picture, have dynamic potential.

The intertwining brown forms in the corners effectively frame the central motif without detracting from its dynamic spatial tensions.

A sensuous rhythm occurs in the black ink line, which is mainly used to outline and accent shapes. This line has an important function in the design of the whole painting.

This is the only square space organization among my thesis compositions, and I consider it rather successful, at least

it is pleasing and satisfying to me.

Strange Fish

In one of many small sketches, I noticed the semblance of a portrait and determined to try a painting of the whole design on corrugated, or striated, plywood. This material was new to me, as a painting surface. Several heavy coats of white Kem-Tone were required before an adequate ground was built up. After a few quick, direct outlines of some of the shapes were put down, using a light blue caesin color, I strengthened some of these lines with black. Then I began painting the shapes in color, including the blue background. It was necessary to paint very boldly in the solid color areas. In other sections the caesin color was put on carefully, with almost a dry brush. Some of the forms were in my original thumb-nail pencil drawings, while others appeared and developed as I worked. The whole painting was virtually completed in one period of concentrated application. Later, I returned to it to strengthen and modify some areas to a slight, but necessary degree.

The composition, like some of the others, employs transparent, overlapping color planes and interpenetration of forms. The use of the principle of "equivocal space" is apparent in some of the planes. The use of color, together with the black line outline for certain areas, stems partially from my experience and interest in stained-glass design. This painting, more than most of the others in the thesis group, was a direct emotional expression.

Abundance

The idea of how a boy's generous offering of five loaves and two small fishes could be expanded to such a degree as to be sufficient to feed a multitude, is the psychological basis for this painting. The shapes were sketched in with pencil on a smooth white ground. The outlines of the loaves and fishes were next painted lightly with a brush. The two tones of the bread and the fish were put down first in flat color areas. then the loaves were modeled with large spots of contrasting colors put down in quick dabs with a wide flat brush. The heads of the fish were developed with blended colors, while their bodies were left flat. The background planes painted in white, and warm and cool, light-grey tones, are so related to each other, and to the central shapes of warmer colors, as to suggest great expansion. The irregular light-blue pattern, extending beyond the grey planes to the edges of the picture, perform at least two important functions. The blue, first of all, acts as a control color to limit the design to the picture-plane. This expansive, rather ethereal color, also has psychological implications to suggest expansion beyond the limits of the picture area. Pen and ink lines were added to give a distinctive texture pattern to the loaves and fishes, and, also, to emphasize the surrounding planes. The painting was mounted an inch forward off a large background board. This was painted a light grey-blue, and allows the eyes to contemplate in flat space, the idea of great potential abundance.

Stage Lights

The idea for this composition was born when I witnessed an English company's production of "The Tempest." During the play, a backdrop painting of bare tree forms was used, and at intervals, a variated pattern of colored lights was flashed on this back-stage curtain. In my caesin interpretation, these lights have become flat, egg-shaped opaque planes of many different tones and colors, seen against a background patterning of intertwining tree branches. Dim diagonal dark planes placed to frame the central area, suggest draped stage curtains. The opaque egg-shaped forms vary in color from cool soft greys and rich blues up through cool greens and reds to warmer tones ending with strong yellows, and bright insistent pinks. To avoid monotony of this color pattern, not all of these areas over-lap each other. The opaque tones that do over-lap, however, give a sense of movement back into depth, as well as sidewise, up and down, and diagonally, to a limited extent.

As an experiment, to give dynamic life to the painting, the suggestive light outlines of dancing figures were scratched through to the white ground.

Dancing Clown

Dancing Clown is a water-color utilizing the principle of overlapping dynamics. It began as a full-size design, in which I was greatly intrigued with patterns created by an interweaving of straight and spiraling lines. I first painted a warm and cool transparent blue wash in large geometric shapes. The only other colors used were two tones, red and two different values of yellow. They were put on first in flat washes over large areas. By overlapping the blues, greens and violets were produced. Smaller areas of varying shapes were then painted in. to give dynamic life and interest to the design. The last tones added were heavy, nearly opaque colors, which play a part in strengthening the whole composition. As in the painting, Strange Fish, my former experience in color-mosaic glass design, accounts in some measure, for my fascination with flat color areas in their pattern relationship to each other in a design. The effect of equivocal space is very marked, I feel, in this space organization. There is much movement into depth, as well as about the picture-plane surface.

When the painting was nearing completion, the figure of the dancing clown in yellow became very apparent.

Holiday

One day I saw a mother with a babe in arms and a little child, all holding baloons. Their faces, I fancied, were like balloons. I made a cartoon sketch of this idea. Some time later, I made a sketch in charcoal, nearly the size of the finished water-color. The transfer to mat board was made carefully, by the enlarged square method, and the pencil lines were inked in. The centrally-placed geometric shape was included in the design along with the straight-line border patterns, as a contrast to the organic shapes of the balloons. The variations in the transparent color-planes give interest, and a positive sense of floating movement in space. Feature suggestions were added for variety and interst. The expressions in the faces are varied from happy to sad ones. In all gaiety and pleasure there is sadness. The whole effect is of a subdues carnival mood-joy overshadowed by pathos.

Spring Quartet

Spring came suddenly to the whole countryside; and in this mood I produced this water-color. It started with the four main shapes suggested in a small pencil sketch. Then after these forms were painted the slipped color planes were added with freely applied color washes accented later as the painting neared its finished state. Other color lines and areas were playfully painted into the design. I feel there are both Spring and music, in the mood and suggested symbolism of this painting.

Bright Promise

This large water-color is painted on gesso board, which is absorbent to a marked degree. Therefore the colors had to be carefully used, and built up. I first drew the central geometric shapes in a small sketch, and them accurately transfered them to the board. Some of the other overlapping forms suggested in this complex space-pattern, were painted freely and boldly with the brush. Bird forms appeared and were slightly emphasized with scratched lines to indicate eye and wing. A bill and feet were added on the blue bird, while the red bird remained more abstract. Some texture effects were added for interest. The gay color determined the title of Bright Promise, for this painting.

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Thesis Study

As I looked down on the papers with notes for my thesis, scattered over the table, I saw a wonderful pattern possibility. From a small line drawing, the large caesin painting developed as a bold and liberal interpretation. Certain shapes and colors were added to give interest and dynamic life to the whole. The planes that over-lap others are opaque, and there is very little transparency present in the whole composition. The painting expresses some of the turmoil, both physical and mental, that is a part of thesis study.

Sea City

I drew an irregular straight-sided shape that I liked.

Then I drew another slightly over-lapping the first. I drew a few more corresponding shapes, and enclosed them all, by circular lines and patterns, in a vertical composition. I next tranxferred these patterns, adding more to a painting surface on celotex. The next procedure was to outline all shapes with a pen line, and to paint them with flat, transparent, color washes. Symbols of the sea and the city became apparent in the design, and I developed them to some extent. Before the painting was finished, I added a series of slipped planes off many of the forms, using a thin to thicker pen-line. The result was exciting in the spatial movement produced. For the human element I placed a small dark figure before an arched doorway. Texture effects in other parts of the design add to the symbolic meaning.

Cats on Corners

This bold-color caesin study began as a small direct black ink broad-line sketch. I drew this black-line pattern directly with a brush on a white ground. I was tempted to leave it then, but decided to add color. The red, green, blue, and yellow was painted full-strength for the most part. A light pattern was left. Certain planes were slipped off solid forms, and some areas of color modified in tone and intensity. The cat forms appeared suddenly, and then were encouraged by shape and color changes, to become more cat-like. The forms of the buildings also emerged.

This painting in its bold, dynamic qualities, points a direction, I feel, for future expressions.

exciting year forms and modes of visual apprecation. These, to-

CONCLUSION

This whole thesis study on plane manipulation to achieve spatial dynamics in painting, has been of great value to me in many different ways. In pursuing this fascinating subject, I have done much research, both in books and magazines of art; in reproductions of drawings and paintings; and, also, through the personal medium of numerous small sketches. Sometimes the enlargement of these preliminary drawings has been very carefully and accurately carried through. In other full-size space organizations, the drawing has been direct, bold, and free. Always, the forms created, and their relationships to each other and to the whole composition, have been closely studied to achieve the finest possible aesthetic qualities in the finished paintings.

One very definite personal value in this study has been an increasing understanding and appreciation of contemporary art, and its relationship to our world.

In this atomic age, there has been a virtual explosion of exciting new forms and modes of visual expression. These, together with yet-to-be-invented forms, seem almost limitless in their possibilities. This great variety is necessary for an adequate interpretation of life. Adding to this diversity, are two facets of human experience which have been revealed more or less consciously in the work of some contemporary painters. The first deals with the sensation of flickering. This may result

from the maddening impact on the eyes of a person riding in a fast-moving car, -- of the piercing rays of the setting sun, striking through a grove of trees. Of course, flickering can come from any of several activities of light. It is, I feel, emblematic of the furious, dis-jointed pace in some aspects of our society. The second segment of experience concerns the terriffic roar of a swiftly passing jet plane, as dis-associated from the particular spot in the sky, where you expect it to appear. Art, today, is full of surprises, which are, to a greater or lesser degree, separate from older, known, and established forms of visual expression.

Also, it is quite evident to me, as it is to other students of art, that the language of art-expression is rapidly increasing in volume with the constant addition of fresh symbols and individualized meanings. These are not all clearly understood, even by their inventors. For example, (as suggested in the body of this thesis), the visiting artists to the 1953 Arts Forum at Woman's College, collectively declared that they were dealing with imagery which they didn't quite understand, but with which they were greatly fascinated.

Again, as a part of this diversity, there are extreme contrasts to be seen in the art of this present age. Some shapes in a painting may be as fleeting as a thin wisp of cloud, and appear to melt almost imperceptibly away. Or, other forms might be bold, direct and powerful. One painting may whisperingly communicate a feeling of ecstacy to the thrilled, expectant

observer; who can thereby make his own, a portion of the artist's vision. Another composition of an entirely opposed nature, can clamour loudly for attention, and yet be just as valid a creative art expression as the first example given. Each type of painting will be enthusiastically acclaimed by those who most thoroughly appreciate and enjoy it. As to the validity of a work of creative art, while there are other essential factors which must be considered in the final judgement, good space organization is the most important criteria for a successful painting.

These contrasts, which have been partially examined, are found in all phases of modern living. In contemporary art, forms and planes are seen in varying degrees of clarity and completness. There are whole forms and broken ones; partial, or disintegrating shares, and those which have been pierced through in one or more places within the area of the plane; also, a multiplicity and interpenetration of forms. These all contribute toward an explanation of the complication and chaos, which is present in society today. Rapid, repeated, and varied movements in all parts of a composition may be used by the artist to reflect an unstable, insecure, and changing order, in some aspects of contemporary living. Expanding shapes, within the area of the painting, might be a symbolic interpretation of man's growing knowledge and experience. When the planes extend beyond the picture-plane limits, they suggest a reaching out into, and inclusion of, vast cosmic, universal space.

The creative artist, I believe, is seldom fully conscious of the real significance of his work as a contribution to an interpretation of the life of an age. Its deeper meaning may be revealed by those who are sensitive to this relationship between art and life, which is evident in his painting. The great variety of form which appears in the art of today, is also, in a limited sense, present in my personal art interpretations. The diversity in my own work is necessary to begin to encompass an art expression of personal experience, and interpretation of the contemporary world, as seen from my private vantage point. In earlier years this individual experience of the world gave promise of being quite limited for several reasons. One of these was that life seemed too complicated, constantly bombarding the deep concentration and contemplative thought of the young dreamer. Now, however, with few exceptions, there is an eager reception for every exciting, new, visual adventure. Much of this material is now stored in the mind and spirit; or in quick sketches, and is available for later development into new expressions through plastic means.

Both in sketches, and in finished paintings, I am beginning to understand how subjective, personal experience, has become objective in the forms and symbols I have created upon the picture-plane surface. In some instances, I have achieved pure form through a non-objective approach; although I am aware that conscious non-objectivity may mean that a sub-conscious objectivity is strongly exerting its influence. In some other drawings

and paintings, objects in nature served as a springboard for a great leap into realms of the abstract, and more purely non-objective spatial world. At first, this conversion of natural forms into abstract organization of space in a painting, was difficult; but now, through study and practice, I find it easier to accomplish.

It is a thrilling experience when I may assist the rebirth of forms in nature into new, exciting, shapes, colors, textures and inter-relatedness.

Regarding a solemn responsibility of the artist for a sincere emotional expression of his subjective experience; Kleel uses a simile of a tree. For, he says in effect: Out of the roots; up through the trunk (the artist) comes welling, the creative life-force; to flower ultimately in the full expanded glory of the crown (the final product of creative expression by the artist.) The roots lie deep in the primal development of mankind. They are entirely unlike the top; for there is no mirrored reflection. The true artist serves as a sincere medium for the final aesthetic creation. He must possess great courage to follow the leadings of the self. Likewise, I must dare to be myself in my creative work in order to be true to inner emotional urges.

¹Klee, On Modern Art, (London, Faber and Faber, Ltd.), p. 13.

There is, in this sense, a spiritual quality in the creative act, which I now more clearly recognize than I did prior to this thesis study.

My future art expression will be definitely influenced by this study of plane manipulation, but only a few of the methods to effect movement in space will be utilized in each painting. I feel there will be some limited use of slipped planes, and much more employment of different types of overlapping forms and shapes, for this technique gives unity to a composition.

There will be new symbols and organizations, influenced to a greater or lesser extent by contemporary art. Also, out of continuing study and research, and from subjective personal experience, fresh inventions in space design will occur. It is my hope and desire, always, that space organizations of merit may result from my own thrilling adventures into the fascinating world of creative art.

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