In the late 1960s, Jack Tworkov's work underwent a stylistic change from a gestural Abstract Expressionism to the use of a solid geometric structure with overall painterly brushwork. Indications of a preoccupation with structure were present in some of his later gesture paintings, but it was subservient to brushstroke and uniform surface texture. Throughout the Painterly Abstractions and the Fields, residual ties to Abstract Expressionism were in evidence in the broad swaths of primary colors that tore across the canvas or in the ascendance of a two-dimensional surface over form. But the perennial presence of an underlying structure, though expressionistic, pointed toward specific preoccupations in later geometric works.

There were many reasons for this shift from spontaneous, automatist works to structural paintings. Tworkov believed that Abstract Expressionism was being vulgarized on a grand scale, and he reacted against it. He also came to believe that the style was no longer free and spontaneous. He found that its automatic aspect had "reached a stage where its forms had become predictable and automatically repetitive." By the mid-1960s, he had also begun to study elementary geometry and number systems, and thus the relationships between points, lines, and planes filtered into his canvases. Knowledge of geometry stimulated awareness of endless variations in subject matter and

compositional format.

This search for structure and stability through geometry was not an uncommon element among abstract artists in the 1960s, but their resultant formalism and artistic anonymity were alien to Tworkov. Regardless of the structure in any of his works, Tworkov's gestural "signature" and his unabashed love of

painting are never subordinated.

Other artists also became disillusioned with Abstract Expressionism during the 1960s, and they rebelled by deemphasizing brush-gesture and the act of painting. Even a number of Abstract Expressionists shifted from gestural brushwork to a simplified canvas with a dominant image that was later adopted and expanded by painters such as Albers, Kelly, and Polk Smith. They reduced the number of forms and kept the surface free from extraneous strokes. They avoided interaction between figure and ground in order to unify the painting, including the support. Although many of Tworkov's paintings emphasize surface and reduce the contrast between figure and ground, he permits spatial depth and the illusion of three dimensions. Most significantly, unlike the hard-edge painters, Tworkov used geometry as a point of departure, or as a constant in his work, rather than as an end in itself.

Tworkov's stylistic change came at a time when sympathies lay against expressionistic painting and there was a lean toward geometry. Although his own philosophy of painting was at odds with that of many 1960s geometric artists, there was some com-

JACK TWORKOV: A RETROSPECTIVE VIEW; PART TWO: THE SYSTEM WORKS

LOIS FICHNER-RATHUS

The years between 1964 and 1982, between Jack Tworkov's retrospective exhibitions, have provided their successes and failures. They trace the evolution of a gestural Abstract Expressionist and his adaptation of lessons learned during his early years to compositions based heavily on structural limitations, integrative brushwork, and uniform surface treatment. They stand witness to the successful fusion of automatism with a geometric structure.

mon ground with those working in a Constructivist vein. Tworkov's work has been spoken of as comprising the two major poles of modern art—Constructivism and Expressionism.³ His drawing and use of imagery have also been linked to Constructivism.⁴ In fact Tworkov's work appears most closely related to the expansionist tendencies of Constructivism of the 1960s in

terms of style, chronology, and philosophy.

George Rickey pointed out that by 1960 t

George Rickey pointed out that by 1960 there was a "strong undercurrent of Constructivist art that began to be felt among the postwar generation." It was evident in their use of "hard, precise, and preconceived geometry." Several aspects of the legacy of Constructivism bear on Tworkov's objectives at this time. One is the "Classic Order"—an intellectualized ordering of geometric forms. A second is the dramatic tension between the need for the direct expression of inner urgings, or "inner necessity," and his will or conscious choice—the "outer necessity"—that is needed to impose an order on (or to execute) them. Thus, as with Tworkov's advanced geometric works, a preconceived plan is executed through the interplay of choice and chance. Additional common ground between Tworkov and the Constructivists included the use of a preconceived geometry, a concept of space that prevented dominance of figure over ground or of volume over void, and an emphasis on the perimeter of the canvas.

Tworkov also shared an interest in mathematics with the Constructivist artists of the 1960s. He developed a 3:5:8 canvas division format from Fibonacci numbers, in which each number in a series is the sum of the preceding two. Concepts such as the "golden mean" and dynamic symmetry also began to fascinate Tworkov. But mathematical laws did not tyrannize Tworkov as they did other artists. Rather, he was able to use them as a tool,

Fig. 1. Jack Tworkov, 39 Continuous Knight Moves, N.Y. 12-31-74 #7, 1974. Colored pencil and graphite on paper, 28½ x 20". Courtesy Nancy Hoffman Gallery.

Fig. 3. Jack Tworkov

Oil on linen, 80 x 80

Untitled (Q1-76 #1), 1976.

Courtesy Nancy Hoffman Gallery





▲ Fig. 2. Jack Tworkov Knight Series #5 (Q3-76 #6), 1976. Oil on canvas, 90 x 75". Courtesy Nancy Hoftman Gallery

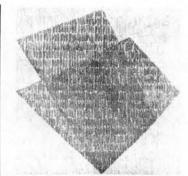


Fig. 4. Jack Tworkov, Untitled (Q2-76 #1), 1976. Oil on linen, 80 x 80". Courtesy Nancy Hottman Gallery.

Fig. 6. Jack Tworkov, Untitled (Q3-76 #4), 1976. Oil on canvas, 54 x 54". Courtesy Nancy Hoffman Gallery.

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or constant, much as Pollock used the dripping of enamel. Throughout the series, there remained the synthesis of a preconceived structure with choice and chance.

Whereas many Constructivists disregarded the notion of chance as precluding logic and concreteness, Tworkov relied on it heavily in the creation of his geometric compositions. But "chance," for Tworkov, differed from the element of chance in Dada, Surrealism, and Abstract Expressionism. Chance, in these movements, was introspective-purportedly linked to the unconscious. But in Tworkov's later work the element of chance is linked to external factors, such as the predetermined geometric structure of a work. With the Surrealistic concept of chance, the unknown is derived from the unknown. In Tworkov's work the unknown is derived from the known. In both cases, the imagery that results from the automatist exercise suggests certain forms to the artist. Whether the vehicle for chance is a block of wood, scraps of paper, an automatist trance, or a mathematical formula, it suggests forms that are then manipulated by the artist. Chance, or the unconscious, need not manifest itself in the melting color fields or swirling lines of the Surrealists and Abstract Expressionists. As Tworkov stated, "Perhaps the unconscious expresses itself in geometry."7

From the late 1960s onward, Tworkov's work has consisted of compositional variations on geometric themes, often derived from predesigned geometric systems. Tworkov is fond of series painting because it permits him to rework variables within a persisting framework—in this case, the geometric system. He began series painting in the 1950s and has carried forward no less than a dozen compositional schemes over the past two decades.

Tworkov's work from about 1967 to 1979 can be divided into

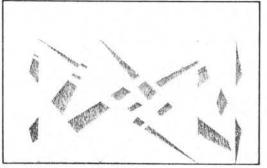


Fig. 10. Jack Tworkov, Untitled (Q4-76 #1), 1976. Oil on canvas, 54 x 671/2". Courtesy Nancy Hoffman Gallery.

two major groups. The first includes paintings that combine a uniform or patterned surface treatment with some mathematically or geometrically derived structure. These compositions, the Structural/Geometric works, date from 1968 to 1974 and include such series as Jag, Interchange, Bisections, and Screens, which were discussed in Part I of this article. In the second major group—the System Works—Tworkov employed some type of system or structural constant, then derived imagery from a specific set of organizational principles. The System Works can be further subdivided into two groups, the first of which Tworkov labeled the Knight series, begun in 1974. The imagery in the Knight series is derived by connecting points within the canvas that were determined by the rules that govern the movement of the knight in chess. The second group of System Works derives its imagery from the perimeters of the canvas. Points are placed along the edges according to preconceived proportions and connected with lines that yield the geometric imagery. He began this extensive series in 1975 with a complex compositional format in which canvas divisions were based on a 3:5:8 ratio. Hence the name, Three-Five-Eight series.

Knight Moves

The Knight series canvases are based on elaborations of the moves of the knight in the game of chess. The rules of chess decree that knight moves are L-shaped. The knight may advance over his own pieces or those of the enemy. The knight captures the piece on the end-square-of his move, and the color of the end squares alternates with each move.

In this series, Tworkov determined the points in his compositions by tracing a sequence of knight moves. Then he connected the points with slanted lines that showed the progress of the knight. The derived patterns differ widely from work to work, just as the patterns of chess games differ. Still, they remain delimited by the confines of the game board and the rules that govern the movement of the pieces. As in other series, Tworkov proceeded with a combination of choice and chance. In each work, the first point was placed in the upper left square of the board in which a knight would sit at the outset of a game. The second point was determined by one of three possible knight moves. The third point branched from the second, in an expanding set of possibilities, and so on. Within the 8-by-8 grid of the chessboard, Tworkov's "moves" show considerable variation. Thus the geometric imagery also differs markedly from work to work. But in each instance the shapes that Tworkov could elaborate had been delimited by the knight paths. Tworkov then selected and elaborated particular rectangles, quadrangles, and triangles with contrasting colors or brushstrokes.

Tworkov imposed certain rules upon himself in addition to those governing the game of chess. They were written at the bottom of one of his first Knight series works, 39 Continuous Knight Moves, N.Y. 12-31-74 #7 (Fig. 1): "Move in straight line as far as the board will allow. Make right angle turns when possible. No move into the same square twice."

In 1976 Tworkov freed his knights from the chessboard, if not from the rules of the game. He divided the entire canvas into a 10-by-12 grid, eliminating the distinction between background and pictorial square (chessboard). He thus expanded the number of squares within which the knight could move from 64 to 120. He replaced alternate light and dark squares with a uniformly colored ground. The grid was further subdivided by diagonal lines sloping from upper left to lower right, intersecting and connecting the center points of the grid squares. The brushwork within the geometric shapes was also altered slightly. Instead of differentiating shapes through various color combinations, Tworkov distinguished planes by increasing the density of the brushwork.

In these later compositions, the knight was also allowed to saunter back and forth. In Knight Series #5 (Q3-76 #6) (Fig. 2), for example, the knight starts in a square near the upper left corner. It moves one square up and two to the right, then one square down and two to the right. This zigzagging continues playfully to hug the upper border of the expanded chessboard. When it nears the upper right corner, the knight makes a right angle downward and briefly continues to zigzag along the right edge of the canvas. But near the center it suddenly departs from the coy edge-hugging and darts diagonally across the canvas toward the lower left in three moves along the same line. This dash stops before confronting the canvas edge. From there it undergoes a pattern of right-angle turns and multi-move dashes as directed by the artist's will rather than by the confines of the canvas or the rules for previous works. The geometric shapes formed by the knight paths lie in two overlapping planes that parallel the background. The grid delineations of the washed background form the substance of these polygons. The areas within the polygons that immediately overlap the background are painted in loosely hatched, continuous M-shaped strokes. Additional geometric forms, including a triangle near the center, are defined by apparent overlapping of this first layer of planes. These additional polygons, which appear to lie closer to the viewer, are defined by hatching that contains twice the number of strokes. Thus, the two polygons that lie in the plane closest to the viewer are more densely painted and richer in texture.

When Tworkov broke free from the confining, predictable mold of Abstract Expressionism, he longed for the imposition of the intellect on his art. Yet in the Fields series and the Screens, he was not yet ready or willing to restrain his love of painting or exclude his gestural signature from his mathematically derived structures. The solution to the reconciliation of structure with spontaneity, of choice with chance, lay in part in the development of the Knight series. In these canvases, Tworkov was able to work within the limits of predetermined structures and criteria for the placement of points. Yet he was free to choose paths, directions, and geometric forms. The board and the L-shaped movement of the knight became his "automatist"

constants. All else resulted from conscious decision. Ironically, these rigid constants were sources of accident and spontaneity for Tworkov. Working with them provided fresh and unexpected lines and forms in each new composition. Tworkov then capitalized on these "chance" elements, altering them to fit his wishes.

A stylistic survey of the variations in the Knight Move series shows that the works fall into three basic categories corresponding to the years in which they were executed. The first works, painted in 1974, are clearly divided into background and board or pictorial square. The geometric imagery is derived from connecting the endpoints of the knight's moves. The boards correspond to actual chessboards: they consist of alternate light and dark squares on an 8-by-8 grid. The second group of canvases, executed in 1975, still divides the canvas into back-ground and board, but the board does not always consist of alternate light and dark squares. The imagery within the board is more complex and extends to the perimeters of the board. In 1976, the board-background division was dropped and the canvas was divided into a grid of 120 squares, ten across and twelve deep. The imagery looms large in the composition, expanding toward the perimeters and touching the centerpoints of the outlying squares. This format corresponds to some contemporaneously painted canvases of the Three-Five-Eight series, in which imagery is derived by connecting points on the perimeters of the canvas. The Knight series works of 1977 are closely related to the Three-Five-Eight series in the enlargement and simplification of the central imagery, and in the use of opaque colors and flat brushwork. However, the L-shaped movements of the knight in the Knight series paintings also influence the path and directions of lines and figures in the Three-Five-Eight series canvases with which they coincide.

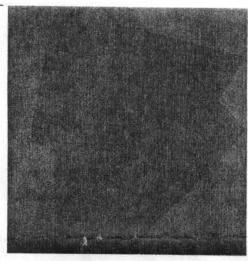
Three-Five-Eight

In the fall of 1975, Tworkov executed a work entitled *Three-Five-Eight #1*. The painting took its name from a system of points which lay on the perimeters of the canvas in a ratio of 3:5:8. Opposite sides of this square had corresponding points that were connected by vertical or horizontal lines intersecting the canvas edges at right angles. The resultant "units" of the canvas were in a proportion of 3:5:8, whether read horizontally or vertically. This painting was a springboard for an elaborate series painted thus far over a span of seven years. It continues to be the constant, or "system," within which Tworkov works.

Three-Five-Eight #1 uses the harmonious color combinations and M-stroke hatching of the preceding Knight series. These idiosyncratic strokes were applied in compacted horizontal rows within the squares and rectangles of the composition. Unlike the geometric forms of the Knight series, these regular shapes appear to lie adjacent in the same plane. Despite the highly textured brushwork, the overall impression of the composition is of flatness. The only suggestion of planes overlapping occurs at the intersection of the vertical and horizontal "strips" of the five-unit dimension of the ratio 3:5:8. In the segments the brushwork is applied more densely. It incorporates the colors of the other shapes of the composition, recalling similar treatment of overlapping planes in some of the Knight series canvases.

The first elaboration of the three-five-eight system occurred in Untitled (Q1-76 #1) (Fig. 3). The points were first established along the perimeters of the canvas according to the ratio 3:5:8, and then connected by vertical and horizontal lines in a manner similar to that of its predecessor. The canvas can also be read as divided into quarters by single vertical and horizontal lines intersecting at the midpoint of the composition. In this case, the quadrants are equal in proportion, since three plus five equals eight. The compositional divisions, as well as the colors accenting the shapes that correspond to the divisions, are repeated on a smaller scale in the lower left quadrant. This "square with-in a square" contains yet a smaller square in its lower left quadrant, which, in turn, is demarcated by 3-, 5-, and 8-unit points along its perimeters. From the lower left corner, Tworkov then sketched diagonal lines connecting all of the 3-, 5-, and 8-unit points on the top and right edges of all the squares. These angles fan out like spotlights across the canvas from the lower left. This interpretation is reinforced by painting alternate angles with dense hatching that combines the colors of the under-

Fig. 7. Jack Tworkov, Alternative I (OC-Q3-77 #3), 1977. Oil on canvas, 54 x 54". Courtesy Nancy Hoffman Gallery.



lying squares and rectangles. The composition at once is elegantly simple and surprisingly complex. From a distance, the composition appears to consist of three overlapping squares of white, yellow, and purple which have the top and right edges of the canvas as common borders. Superimposed on the "simple" shapes is a small echo of the same "composition." Only on closer inspection do the complex proportional divisions and the delicate, superimposed diagonals become visible. Of the many variations on this format, whether simplified or elaborated extensively, few have the monumentality and harmonious repose of this composition.

From this basic three-five-eight system, Tworkov moved simultaneously in two directions. In one group of works he maintained the 3:5:8 ratio within a square canvas. In the other he extended the format to rectangular canvases that were divided in half, each half in turn divided according to the 3:5:8 ratio.

Untitled (Q2-76 #1) (Fig. 4) is a square canvas that combined the three-five-eight system of point placement with the overall grid structure of the Knight series painting. In this work Tworkov placed points along the edges of a "pictorial square" within the canvas borders. Although the space between the borders of the canvas and the pictorial square is painted in pale blue (the background color for all of the derived shapes in the composition), there is no sense of overlapping. Rather, this space is perceived as a simple "frame-within-a-frame." This frame-within-a-frame became a constant in Tworkov's compositions, although the space between the canvas edge and the image was gradually reduced and painted identically to the background of the image. Thus it ceased to be a design element. Tworkov explains that he began using the frame-within-a-frame to ensure clarity of the points and to facilitate stretching the canvas while keeping the points in proper relation to one another.

The background of *Untitled* (Q2-76 #1) is divided into an overall grid, and the individual squares are painted with layers of dark and pale brushstrokes over a pale blue ground. Points were placed along the perimeter of the canvas according to the 3:5:8 ratio. Tworkov then connected the points to derive imagery and delineate overlapping places.

delineate overlapping planes.

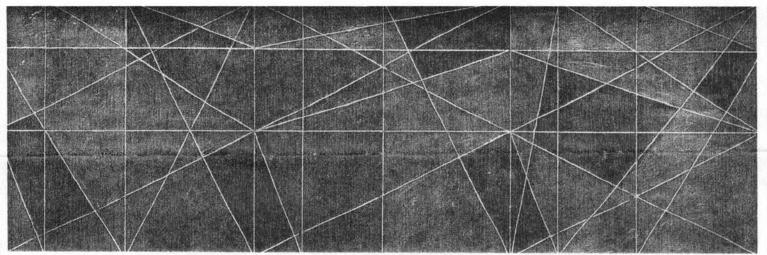






Fig. 5. Author's Diagram.

The spaces within the forms retain a grid structure, the squares of which consist of dark blue strokes superimposed on the pale blue ground (see Fig. 5). The area of overlap between these geometric shapes incorporates the brushwork of both. Consequently it is denser in application and deeper in color. Point placement is sparse. A few connective lines define large simple shapes. Tworkov's presentation of the relationships between these images is clear and concise—a dramatic, simple statement. The technique does not overpower the form, and the forms are related harmoniously to the surrounding space. From a distance, the shapes appear to move in tilting planes, sliding back into space or pushing forward to the picture plane. This



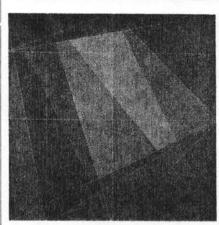


Fig. 11. Jack Tworkov, OP-Q3-78 #1, 1978. Oil on paper, 11 x 31". Courtesy Nancy Hoffman Gallery.

Fig. 8. Indian Red Series #1 (Q3-79), 1979. Oil on canvas, 72 x 72". Courtesy Nancy Hoffman Gallery.

movement stems from the shapes of the quadrilaterals, which narrow and broaden on opposite sides to create the impression of recession into the background. However, upon closer inspection, the surface treatment tends to keep the images in planes parallel to and not distant from the picture plane.

The complexity of Untitled (Q3-76 #4) (Fig. 6) stems from the connection of each of the perimeter points to all of the others with the thinnest of black lines. These lines contrast with the lushly painted strokes of the background and quadrilaterals. The result is an intricate, orderly, and symmetrical web of taut, wire-like lines that determine the shapes of the geometric forms and stretch their corners toward the edges of the canvas. The space which Tworkov creates is disconcerting. The quadrilaterals may be perceived, as in Untitled (Q2-76 #1), as receding into space at sharp angles and intersecting in the lower right quadrant of the composition, along its bisecting diagonal. The connective lines, superimposed upon the quadrilaterals, first appear to be in the foremost plane of the composition. But the lines may also be perceived as moving in three-dimensional space at their point of convergence. Since the lines define the perimeters of the quadrilaterals, and the quadrilaterals can be viewed as tilting planes, the lines may also be perceived as receding in space. Since neither of these interpretations can remain "correct" for long, there is a dramatic tension between the lines and the forms which contrasts with the more stable and deliberate movement of the large quadrilaterals. The shapes at once suggest large patterned pieces of fabric stretched by unrelenting strings, or, perhaps, a geometric marionette tugged in one direction or another by thin wires.

Throughout 1976, Tworkov continued to paint variations on this general theme. He divided the canvas into an overall grid, connected the 3-, 5-, and 8-unit points with thin black lines, and ensnared simple shapes within these complex webs. In 1977, he made several changes. He retained the square canvas and the three-five-eight system. But in a group of works entitled "Alternatives," painted from the fall of 1977 through the winter of 1978, Tworkov eliminated the background grid, painted his connective lines white or removed them, increased the number and variety of geometric shapes, and changed his palette and brush-stroke.

The background of Alternative I (OC-Q3-77 #3) (Fig. 7) is densely painted with three layers of thick vertical strokes in horizontal rows. This richly textured brushwork of light and dark tones is superimposed on a bright ground that shimmers through the dense strokes of the upper layers. The 3-, 5-, and 8unit points are distributed along the top, bottom, and right edges of the square canvas, but in this composition there are no superimposed connective lines. Instead, the only lines drawn to connect various perimeter points also define the contours of the central geometric imagery. This imagery consists only of three major shapes: the narrow rectangle of the 3-unit vertical strip and two quadrilaterals. Because the central images are not bound by connective lines, they are freed to undergo a number of perceptual and perspectival shifts. The shapes can be simply read as overlapping one another in parallel planes. However, because the quadrilaterals narrow toward their bottom edges, they can also be perceived as jutting into the viewer's space and intersecting the background at about a 45-degree angle. However, two compositional elements tie them to the surface of the painting and deny the three-dimensional interpretation; the overall surface treatment and the standard frame-within-a-frame, into which the 3-unit rectangle extends.

In the fall of 1979, Tworkov began another series entitled Indian Red, which was based on the three-five-eight system and generally derived from the same palette in color and brushwork. In the Alternative series, each composition consisted of connective lines and varied geometric shapes. But the works of the Indian Red series all differed in terms of lines and forms. The group of seven works shows no fewer than three combinations of shapes. Within each compositional type, the works differ also in degree of complexity.

Indian Red Series #1 (Q3-79) (Fig. 8) is a square canvas divided according to the 3:5:8 ratio whose background is divided into bilateral fields of opaque gray and brown pigment. The brushwork is applied thickly, and its pattern is discernible only through the play of light across the richly textured surface. The palette consists of murky tones of gray, brown, and Indian red. Tworkov set himself the task of applying one color directly from the tube and deriving from it the other tones in the composition.9 White connective lines stand in contrast to the ground they superimpose and serve either to define the borders of the shapes or to delineate sections of canvas that are to receive overall brushwork. Although a large translucent quadrilateral seems superimposed on the multifaceted and colored ground, there is no sense of three-dimensionality. The perceived overlap is not of shapes in different planes, but of a painted overlap of segments within the canvas. The muted tones and highly textured brushwork, along with the flatness of the fields and the superimposition of the connective lines, all enhance the two-dimensionality of the painted surface.

In works in which Tworkov superimposed a larger number of diagonals to connect the 3-, 5-, and 8-unit points, there is a greater tendency to perceive the shapes as three-dimensional, regardless of the manner in which their interior spaces are painted. In *Indian Red Series #2*, the imagery suggests folded paper, or a series of planes that fan out from a single line along the bottom of the canvas.

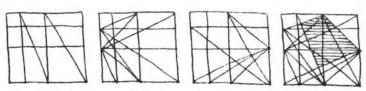


Fig. 9. Author's Diagram.

These forms (see Fig. 9) appear to overlap even though they are individually opaque. This perception is reinforced by the large quadrilateral that lies in the foremost plane and distorts the color of the quadrilateral just beneath it. The underlying quadrilateral can also be perceived as two segments of a single geometric form that intersects a plane to merge with the topmost quadrilateral. These differing perceptions are puzzling. When the eye tries to check their correctness, it finds that certain lines presumed to be continuous, but interrupted by the intersecting plane, do not in fact meet. What was thought to be a single quadrilateral painted in a solid color is fragmented by a connective line and no longer functions as a solid plane. The white lines suggest an intricate scaffold supporting a variety of planes and also reassert the two-dimensionality of the canvas by their superimposition on the forms. Despite the strong suggestion of three-dimensionality afforded by the many diagonals, the flatness of the composition is retrieved by the major verticals and horizontals of the three-five-eight canvas division. These lines remind the viewer that the composition consists of the surface connection of points and lines.

Tworkov began connecting specific points within a square composition in the Knight series canvases. Throughout that series the imagery expanded to fill the space within the canvas, presaging the format of the Three-Five-Eight series. There was a tendency toward simplification of palette, structure, and imagery throughout the Three-Five-Eight, Alternative, and Indian Red series. But the simplification of components increased the complexity of the spatial relationships by encouraging perceptual shifts among the relationships of the images and back and forth from two to three dimensions. In these square compositions, Tworkov tirelessly explored the multitude of relationships

between points, lines, and planes.

In the spring of 1976, Tworkov began to use systems of points and connective lines within a rectangular format. In the winter of that year he extended the canvas divisions from three units in the ratio of 3:5:8 to five units in the ratio 3:5:8:3:2. In Untitled (Q4-76 #1) (Fig. 10), Tworkov inscribed a rectangle within the larger rectangle of the canvas, recalling the board and background format of the Knight series works. Then he placed points along two sides of the inner rectangle, marking the 3-, 5-, 8-, 3-, and 2unit divisions. Unlike the earlier square canvases of the Three-Five-Eight series, each point along one line was connected to all points on the opposite side of the rectangle, increasing the complexity of the web of diagonals. There are no horizontal 3-, 5-, 8-, 3-, and 2-unit dividers, and since the verticals are seen as only one line of many fanning out from a point, they do not tie the imagery to the surface as they did in the square canvases.

After the points were connected, Tworkov derived quadrilaterals from the intersections of connective lines in a seemingly random fashion. The connective lines, nonassertive, divide the canvas and provide borders within which to paint, rather than outlining the geometric imagery. The spaces within the forms are rendered with short vertical strokes of pink and purple that are allowed to drip within the borders. Because of the greater distance between points, the shapes that result from the intersection of the connective lines differ considerably from the stout quadrilaterals of the square Three-Five-Eight canvases. They become streamlined triangles and quadrilaterals of various sizes. Because the lines are drawn lightly and delicately, in contrast to the densely painted geometric forms, these forms are not constrained. As a result, they appear to move in a three-dimensional space. Nonetheless, the composition is perceived most strongly as two-dimensional due to the lack of background differentiation or overlapping of forms.

Canvases such as these are interesting because of their relationships between points, lines, and forms that lie within a canvas divided according to an extended 3:5:8 ratio. The shapes of the images change dramatically when the 3:5:8 ratio is applied to a rectangle rather than a square. The shapes and their relationships to the diagonals that sweep across the wide fields are intricate and intriguing.

Tworkov has more recently become excited by the widened range of possibilities provided by working with an extended rectangular rather than a square canvas. 10 He has thus added a third square module that is divided into 2-, 3-, and 5-unit segments. Diagonal lines connect the reference points within the squares. At times they extend across consecutive modules, carving out large parallel chunks of the pictorial rectangle. In OP-Q3-78 #1 (Fig. 11), an oil on paper sketch, there is a shift of emphasis from geometric forms to the connective lines from which they derive. The lines now function as the predominant structural and design elements. They do not compel the composition into two dimensions, as did the line in other works. Rather they function as a screen through which the web of lines that ensnare the fleeting quadrilaterals can be perceived. These works stand chronologically between the Alternative and Indian Red series paintings. They elaborate the role of line in the former and presage the flatness of color and brushwork and emphasis on figure-ground relationships in the latter.

The comfort of a systematic framework within which he can exercise the persistent need for spontaneity has, in some respects, been a disadvantage for Tworkov as he has worked to return to a totally unstructured, freely expressive style based on gesture. Recent efforts in this direction are manifested in a group of pastel sketches that are impressionistic in concept and palette, yet unique in their calligraphic stroke. By his own admission, the past several years have been frustrating for Tworkov as he has tried to break free from his self-imposed system into a completely free style. He has found that he is not yet ready. The canvases that he arduously prepared for his recent retrospective were derived from further extensions of the Three-

Five-Eight Series.

At present it appears that Tworkov may be inextricably bound to a self-perpetuating style. Perhaps the will to break free is there, but the artistic spirit has weakened. Yet Tworkov has never been willing to compromise his artistic principles in order to resolve his restlessness. The works will come. The seeds of expressive originality are there. For Tworkov it is the struggle that is intellectually stimulating. The process is most significant, and one would have to predict that these transitional gestural sketches will soon lead to another transformation in Tworkov's style.

The years between 1964 and 1982, between Tworkov's retro-spective exhibitions, have provided their successes and their failures. They trace the evolution of a gestural Abstract Expressionist and his adaptation of lessons learned during his early years to compositions based heavily on structural limitations. integrative brushwork, and uniform surface treatment. They stand witness to the successful fusion of automatism with a geometric structure.

Tworkov's work does not offer ultimate statements, and that may be one more reason why he has suffered a lack of critical acclaim. To him the process of personal growth as an artist is paramount in importance. Rather than producing endless variations on the solution to a single artistic problem, Tworkov has always felt compelled to generate new problems:

... as an artist, I have the sharpest appetite for ideas around painting. I love the play of ideas, they stimulate and excite me. They make me go to the easel in a fever.19

Parts I and II of this article were derived from my doctoral dissertation, completed at Massachusetts Institute of Technology. I am indebted to Wayne V. Andersen and Mark W. Roskill for their invaluable comments and suggestions.

Conversation with Jack Tworkov, October 4, 1979.
 Jack Tworkov, "Notes on My Painting," Art in America, September/October 1973 - 60

Jack Tworkov, "Notes on My Painting," Art in America, September/October 1973, p. 69.
 April Kingsley, "Jack Tworkov," Art International, March 1974, pp. 24-27.
 Ibid.
 George Rickey, Constructivism: Origins and Evolution (New York: George Braziller, 1967), p. 90.

Conversation with Jack Tworkov, January 12, 1980. Ibid.

Ibid.

Ibid.
 Diary Notes, February 28, 1952.