An Interpretation of Color Fields Through Screen Printing

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ROCHESTER INSTITUTE OF TECHNOLOGY

AN INTERPRETATION OF COLOR FIELDS THROUGH SCREEN PRINTING

A THESIS SUBMITTED TO THE FACULTY OF THE COLLEGE OF FINE AND APPLIED ARTS IN CANDIDACY FOR THE DEGREE OF MASTER OF FINE ARTS

BY

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CHAPTER I

INTRODUCTION

The purpose of my thesis was to articulate my theory of color fields through a series of screen prints. My definition of the color field contained three basic elements: color, form, and spatial relationships.

Throughout my work I related my ideas and concepts to those of Henri Matisse's gouache collages. I found his ideas regarding color, form, and space most exciting. Though the imagery differed greatly, the basic thought structure was important enough to me to make it an essential part of my entire thesis presentation.

In creating my images I worked with a variety of stencils. The direct quality of the screen printing process enabled me to easily change stenciling techniques in order to get the best defined image. Although paper and handout water-based film stencils were used most often, I experimented with various other processes.

Each print of the thesis series was based on the same thought processes, yet each retained its individual imagery. For example, a landscape theme was evident in every print but it was interpreted differently. A more thorough discussion on each piece will be included in this presentation.
CHAPTER II

MY COLOR FIELD THEORY

My color field theory was the culmination of ideas resulting from my thesis prints. I began with a vague idea of how I wanted to work in an abstract format, manipulating color, form, and space to create my prints. With each piece I learned new properties and expanded my artistic and technical language. I still didn't feel that I had a conclusive theory. Instead I had one which was better defined and broader.

Color was of primary importance because it was the basic and common instrument of my prints. I developed various areas in which I used and defined my colors. I described color in terms of its value - light or dark, transparent or opaque. Making the choice of a particular value was a very important consideration. Because I often wanted to create a feeling through color, a wrong choice could disrupt this feeling. For example the first color to be printed sometimes worked as a paper color change. Other colors printed on or around it had to interact with it. I purposely created such a large color area in order to force myself to quickly establish other color relationships.

Subsequent colors either harmonized or sharply contrasted. To continue feelings or thoughts from one area I would work with color areas which were similar or close in value. I created tensions or heightened areas of interest by using contrasting colors. I discovered that a very small color contrast could create a strong tension. I used transparency and opaqueness as well as light and dark as a means of contrast.
Blended areas had subtle transitions between each color. The individual colors were usually from the same family, but sometimes were value contrasts. In either case the use of blends provided a change in the color language since they did not dominate the image. I used blends of the same color family to create a space. The changes between the individual colors were usually so subtle that it was difficult to discern an exact number of colors in the area. Blends of contrasting colors were used to create another type of illusion. The contrasts between individual colors distorted the space and these transitions created a rounded space.

I often used specific colors in my compositions to describe an emotion or a feeling. For example various shades of red represented an exploding force, and in the same print a transparent white suspended in space gave a floating feeling. In order for a color to be symbolic it had to relate to the other colors and not exist by itself. This would defeat the purpose of the symbolism if the color stood alone in the composition.

As in value, color itself had various physical properties to me. I thought of the color as having a mass and weight. A large dark opaque represented something of great density. It seemed that it would be difficult to hold and very awkward to handle. On the other hand a light transparent floated. I did not try to disguise these qualities; I preferred to emphasize this.

By using a quantity of color I was able to create many planes to describe my space. I wanted to use the basic flat quality of the color ink to establish background-foreground relationships, as well as a number of planes in between. I used the contrast of light and dark to define various planes. I could also create depth within a plane by printing transparent colors on top of one another. This would define a space within that particular plane.
In creating forms for my compositions I had to consider both their overall appearance and how they related to others already defined. I would determine an area in which I could create a shape and then integrate it into the entire image.

In designing my forms my first consideration was their visual strength. I defined this in regard to the impact of each individual shape. Color was an important factor here. Small forms could be weakened by the use of either too light or too transparent a color. Linework was especially critical. The color had to clearly define the line without changing its impact from a line to a bar.

The individual forms had a specific mass. The relation between their size and color determined their visual weight. It was important for my forms to be solid in structure, or light and buoyant, or somewhere in between. I wanted them to have a mass and weight as a description as well as the color definition.

Some of my forms were created specifically in terms of a three dimensional space. I used more than one plane within the form to do this. My purpose in depicting a dimensional object was to contrast it with other forms which were primarily two dimensional. I embossed forms to describe them without color. I felt these forms were a direct extension of the paper, as they rose from the flat plane of the paper surface. This was a three dimensional quality which interrelated with the flat inked surfaces.

Motion was an important quality of my forms because I did not want them to exist in a static space. Many of the individual forms depicted a movement. Within each composition there were numerous activities generated from these forms. A form could be abruptly interrupted by another, causing a hesitating motion, or it could be a flowing, more dynamic movement as in a very angled diagonal. I also described a
continuing motion through the use of concentric circles. It traveled from the outside to the inside circle, and then back again without hesitating. I printed forms of conflicting motions near one another to create a tension between them.

The quality of the forms’ edges was an important consideration in creating the forms. An irregular edge aided in describing a form’s movement. I felt with this type of edge there was a gradual transition between the body of the form and the areas surrounding it. The edges from paper stencils gave a similar effect, as the softness of the edge produced a gradual move from the form to its background. Cleaner edges seemed to contain the form more solidly. There was no flow from the body of the form and it was defined more precisely.

The space in my compositions was created by combining the forms with color. I worked to establish a variety of planes in space, setting the forms into a fore-, middle-, and background. I related this structure to a landscape. It was not only this structuring but also a strong motivation to relate my abstract forms to a natural environment. Another element of the traditional landscape was a prominent horizontal. This was evident in each print and was a factor which enabled the foreground-background to exist.

The color forms existed in numerous spatial planes. I worked with form to specifically define a plane and to allow other forms to exist within it. I composed my images so that they had a great deal of depth to them. By using transparent colors I could layer my forms to establish a spatial depth. This layering and interweaving also created an ambiguity about the actual spatial arrangement of the forms. I could also create depth by weaving my forms between one another. For example, a form which stopped at one edge of another form and then continued from the opposite edge appeared to physically pass behind. Opaque forms which lay on top of
others appeared to be in a space above. Either arrangement was more obvious and did not have the ambiguous qualities of transparent layering.

In creating some of my forms I defined them in terms of negative spaces. Forms from negative spaces created another element in defining spatial relations. These forms appeared to be removed from the other color forms. They were located either in a plane far behind or in front of the rest of the forms. To describe the outline of the form I used the edges of the other colored areas. Negative forms could also be the result of a non-printing area. Either the paper or another transparent color gave these negative shapes their color definition.

These ideas on color, form and space were the ones I used to define a color field theory. I dealt with more than just the properties of color; I also wanted to portray numerous relationships between color and form, color and space, and form and space.
CHAPTER III

INTERESTS IN HENRI MATISSE

My interest in the work of Henri Matisse developed from an indepth study of his gouache collages. In order to illustrate specific points of interest I chose two of his collages. I felt that The Snail and White Torso could help to describe my interest in Matisse's collages. This would include similarities and differences, as well as areas of strong interest with no definite relation to my work.

The Snail resulted from a series of drawings. Matisse worked to abstract it from a representational image while still retaining the basic feeling of a snail's shell. It seemed to me that his forms were arranged in a swirling pattern, similar to the shell. This arrangement reminded me of the way in which I dealt with the landscape theme in my prints. I worked to remove the images from the traditional landscape, yet retain the strong horizontal as identification.

I felt that Matisse defined his background through the use of a negative color form. He cut and assembled a border of orange, leaving a white form in the center. The subject existed primarily in this form. I worked with a negative space but not on the same scale as in The Snail. Negative spaces were used in my prints as extensions of another form or as shapes resulting from non-printing areas.

I felt that in The Snail Matisse used color to both describe the individual forms and the swirling movement created by their arrangement. My immediate reaction to the color was that its vibrancy forced me to really
concentrate on the forms and their edges. I was very conscious of their boldness and strength. The contrasts between forms and their overlappings seemed to create several planes. I responded to the color change of adjacent forms, to the movement from the yellow shape to the orange, to the red, and then to the other orange.

Matisse's use of the scissors to create his forms was very apparent to me. The orange of the border revealed irregular lines that were the result of the cutting scissors. All of the forms in *The Snail* had very irregular edges which to me seemed to give the overall composition more movement and to heighten the interest of the viewer. I enjoyed the idea of identifying the way in which a form was created. One of the reasons I used paper stencils was to create a form that showed the nature of the torn edge. I used a screen of nylon organdy to emphasize certain textural edges.

In *White Torso* it seemed to me Matisse made a strong statement on the figure in one simple form. He cut the background of the image from a blue paper and pasted that onto a sheet of white. It was this form which outlined the torso, thus the negative torso became the positive image. Matisse reversed the space by placing the background element physically on top of the white.

I saw both similarities and differences in Matisse's thought processes regarding *White Torso*. A great number of Matisse's collages were representational. Particular images within the collages were often identifiable as figures. My images were greatly abstracted from natural forms. I based them on a landscape theme but I did not try to have each form identified as a certain element.

Matisse's use of a quantity of color was extremely evident in *White Torso*. He worked with the one blue form and used that to describe
the torso. The white in White Torso was the result of the blue form pasted onto white paper. This color quantity idea of Matisse's appealed to me. I wanted to use this thought to create a print with a form of similar color strength. I expanded upon this idea and used smaller forms to further define and describe a large one. This differed from Matisse's as he worked to eliminate much of the detail from his images. White Torso was defined primarily by the contours of the blue and white, without other colors or lines describing it.

It appeared to me that Matisse wanted to combine the physical planes of the blue and white into one space. There seemed to be a contradiction between blue and white as foreground and background spaces and this resulted in one definable plane. I preferred to establish many planes in my prints. I used layers of transparent colors for obvious descriptions of planes and overprinted opaque colors for more subtle effects. It was very important that many planes existed in my prints and that one plane helped define the other.
CHAPTER IV

TECHNIQUES

In creating my images it was necessary to consider the variations of the stencils, inks, screen meshes, and squeegees. In order to give proper definition to a form, I had to use a certain combination of these variables.

The primary stencils that were used were paper and handout water-based film. The paper stencil allowed me the flexibility of spontaneity in creating the form and the ability to quickly alter my image when necessary. The nature of the paper revealed itself in the printed form, most noticeably in those stencils which were torn from the paper as opposed to being cut. For this type of work a coated paper or vellum was preferred due to its resistance to the ink bleeding through the paper. Because hand-cut films were adhered to the underside of the screen, they gave me the freedom to work with delicate images or those with intricate elements which would have been extremely difficult to print otherwise. They also gave me the flexibility of changing colors without damaging the stencil. With a paper stencil, once the ink was pulled across the screen, it was impossible to clean and reuse the stencil for another color. With the films I was able to wash the screen out and continue to print. In instances when a change was necessary, I used hand-cut films.

Photographic silk screen films were used for linework and certain delicate textural effects. I used a commercial direct emulsion material and an indirect film. The direct stencils were applied directly into a
clean screen and when dry, exposed with the positive to an arc lamp. The image area was washed out and the screen dried. It retained fine detail because it was in the mesh of the screen. The indirect stencil film consisted of acetate with a sensitized emulsion on it. The film with the positive was exposed with an arc lamp, developed for 90 seconds, washed out and then adhered to the screen. This sometimes created a problem because unless the screen was perfectly clean, the indirect stencil would not adhere.

In order to use either direct or indirect stencils I needed to have my image in the form of a film positive. For best results I used a copy camera to reproduce my drawn image onto film. Since the use of such a camera was not always possible, I resorted to creating my own films. By using opaque ink and paper I could draw and assemble my images onto a sheet of acetate.

For some of the textural screens I used a commercial block-out liquid. This could be applied to the screen with a brush, sponge or card and when dry, the ink did not penetrate it. This way I could block out the negative areas of the image. In order to obtain a positive area I used a technique similar to the glue-tusche stencil. I rubbed a soft litho crayon into the screen to make the positive image. The block-out was then applied over the entire screen, covering the litho drawing as well. When this dried the drawing was washed out with solvent. The positive printing image was then left in the screen, ready to be printed.

I used commercial poster screen inks, modifying them in several ways. Transparent and halftone bases were capable of increasing the transparency of the inks. The halftone base was essential in printing any linework or fine detail. By adding a quantity of solvent to the inks I could produce a soft, bleeded edge on my forms. I also discovered that I
could temper the inks with the careful addition of artist's oil colors. Because of the difference in their consistency, I had to blend the oils with a base and then add this to the poster inks.

I used a variety of different screens meshes and squeegees in order to obtain certain effects. A screen with a high thread count per square inch was ideal for fine linework. These screens held the quality of the line without saw-toothing. Saw-toothing was the result of using a screen with too low of a mesh count for the image. The image would print with a ragged edge, similar to a saw's blade. To emphasize certain textures, I used a screen stretched with nylon organdy. This had a very low thread count and would print the weave of the fabric. My squeegee selection ranged between very sharp and rather rounded. The rounded squeegees deposited a heavier layer of ink, which was needed with the opaques. The sharper ones printed fine detail and were necessary with the very transparent colors.
CHAPTER V

DISCUSSION OF PRINTS

Explosion in Red

The first print done as part of my thesis work was Explosion in Red. This print represented the most literal translation of the landscape theme of any of my pieces. The idea behind its conception was to create a tranquil image, both in form and color, and then sharply interrupt it with a number of smaller forms, done in a different medium. The print was dominated by strong horizontals, printed in subtle transparencies. The stencils ranged from a simple cut paper to litho crayon blockout stencil. Colors were built up and overlapped to give a greater feeling of depth to the image. I had envisioned keeping the top half free of any images other than the smaller plates, but decided against that and printed a white cloud-like form.

After the screen printing was completed I began to work on the zinc plates to be printed in intaglio for the "explosion". I decided on an irregular four-sided shape. I felt that type of form would be necessary to emphasize the difference between the plates and the screened forms. It also gave them greater importance in the overall image. The plates themselves consisted of an organic textured aquatint with prominent parallel lines. I chose red as the basic printing color to further strengthen the idea of a forceful explosion. There were several reds used on the individual plates as well as different plate wiping techniques in order to give some variation in their appearance. For a final emphasis I rolled red along the edges of
each plate. The actual printing was accomplished by placing the individual plates into a large stencil and then positioning the predampened prints over that. Printing them in this manner allowed me to place the plates consistently in the same point throughout the edition. I felt it was necessary to add one more element to further define and organize the entire image. I used an embossed grid, which covered the image. I felt the image was resolved with the lines which located the forms in different planes and united them.

**Graphed Points**

Upon completion of Explosion, I began work on Graphed Points. My initial idea was to create a space with varying depths, one in which forms floated in a foreground-background structure. This print again took on strong resemblances to a landscape, yet it was not as recognizable as in the previous print. I decided to work in a more restricted palette, but not to let the color choice hinder the creation of my images.

The first form was that of the strong horizontal shape with the torn-edge triangles working as negative spaces. These forms set the pace for the development of the rest in the print. It seemed to be an interesting challenge to combine these triangular and rectangular shapes throughout the print. With the addition of the large blended area the image began to unify. Again the triangular forms were the result of a non-printing area. These were the shapes that I wanted to work with to create the illusion of depth, placing some of them in various planes in space. I worked out a grid using two inch units as an initial means of locating the triangles. The lines of the grid either passed over or stopped at the perimeters of the shapes and didn't extend into the bottom horizontal shape. Since the lines of the grid were thin, especially in comparison to the other
areas, I printed them in red to give them strength without extra weight. From this point I added further interest and definition to the gridded areas through highly textured and solidly colored, transparent squares. These also aided in defining the planes of the large triangles.

My final decision was to print a transparent yellow over the first horizontal form. The yellow was printed within the perimeter of the first shape with the top edge extending into some of the blended area. This helped to integrate these two main forms. The use of the transparent yellow helped to reduce the value of the original yellow shape and eliminate a feeling of conflict between the importance of these forms.

Small P

The work on Small P was done in conjunction with Graphed Points. While working on the previous two prints I began to feel a tightness in my style and that constructing a print with the same fluidity I had used in earlier experiments would help to loosen my compositions. The initial idea for the piece was to establish several forms and arrange them in a spatial relationship of varying planes. The green, blue, and red forms were printed first. Various transparencies helped give the colors a greater depth. With the introduction of the blended grey form I added a mechanical element to the print, as prior to that, the shapes were primarily organic. These two elements presented me with a problem of how to unite the two contrasting forms. My resolution was to drop a great portion of the print back in space with a transparent white field, leaving one red shape uncovered. A narrow transparent grey field was printed over some of the the remaining areas which weren't covered with the white. These two fields reduced the intensity of some of the original colors.

Between the white and grey rectangular fields there remained a
narrow band which had not been covered by either field. A network of lines was added to the grey area as a means of creating a three dimensional space. More shapes were printed over the white rectangle, including a very opaque crimson form fitting within the mechanical grey shape. These shapes were necessary to create a circular focus pattern for the print, beginning at the left side and moving up and across to the right. The opaque crimson form also created a sense of color tension between it and the one red shape which had not been covered by the white over-printing. The final addition to the print was a series of opaque white lines. I had originally envisioned the lines covering the entire print, but after a trial run, discovered this to be too confusing. I decided instead to print them over the crimson form and the narrow band that had no transparent over-printing. I felt the image was resolved with the lines which located the forms in different planes and united them visually.

**Basic Brown**

**Basic Brown** was an idea which grew from the small opaque form of deep crimson in the previous print. I wanted to begin a print whose main form was opaque and of a deep color. I decided to work with a large field of a dark brown and to establish a space of varying planes in relation to it. The two brown forms were the first to be printed. An adjustment was made in the color of the top form in order to eliminate a repetition. I then introduced the three green rectangles which were the same value as the brown. The dark green forms appeared to float on top of the brown field and exist behind a light green field. I printed a vertical light green rectangle near the brown form. There were three small indentations in this rectangle which created a visual extension of the green rectangles. I enjoyed this discovery as it gave me a new means to
set up spatial relations.

The transparent red shape was printed on the top edge of the large brown form. I extended this idea by over-printing a small area of a similar form onto the light green. I then printed a green rectangular outline on the bottom left corner of the brown field. One of the edges was slightly broken and distorted, giving the illusion that it passed through the brown, like a safety pin through fabric.

I maintained the idea of the rectangles by printing another one in brown. It was at the top of the row of green rectangles and was the same value as the brown upon which it was printed. I used papier collé to extend this brown form into the light green rectangle. The papier collé of rice paper added a new language element to the print. The extension of the brown rectangle was physically above all the other forms, yet due to the translucency of the rice paper, one could still define the color and edges of the light green. To prepare the paper, I cut and tore the desired shape. The torn edge fit against the large brown form and repeated the irregularity of its edge.

Finally, I created a set of irregularly embossed forms as a transition between the large brown and its smaller counterpart. A certain degree of tension was established from the embossed forms which were physically in a plane above the strong brown fields.

**Blue B**

I advanced some of the thought I had in *Basic Brown* to *Blue B*. I decided to work again with a deep blue field with a boundary more irregular than *Basic Brown*. The stencil for this blue was made by brushing block-out towards the interior of the image area. This not only created the irregular shape but also gave me a form with a strong diagonal
movement. The yellow blended band was printed as a means of contrast, both in form and color. With this shape I wanted to emphasize the basic quality of rectangles. The yellow band was the combination of vertical and horizontal rectangles. The band itself defined a base and height of yet another rectangle. The corners of the band were important, as the inside one was angular and the outside rounded. (See drawing below.)

I began to work with the main dark blue area of the image. Over the dark blue I printed a light blue field with a circular form as a non-printing area. I then printed over it a field of a similar light blue. This gave the circle a light blue color. I decided to extend the language of the circle. I drew a progression of concentric circles and printed them slightly off-center from the original form. I printed one of the circles in slightly different color from the rest in order to increase the focal attention to that area. In the creating and printing of two light blue fields I was very conscious of corners being either rounded or angular, and what happened when a rounded one was printed over an angular corner. The subtle changes in color and the nature of the corners allowed me to distort the spatial placement of these fields.

I began to work with some new ideas regarding progressions and
transitions. I decided to use the idea of a progression of color changes within a horizontal form bridging the light blue fields and the yellow band. I chose three colors, a red-yellow, a yellow-blue, and a blue-red. These inks were very opaque so that they would physically lay in a plane above the existing ones. I arranged these hues to create a contrast between the colors and printed them as a blend. The form itself was reminiscent of the dark blue field but the diagonals of the edges pointed in the other direction. This created a contradiction in the feeling that had been established by the dark blue field. The final form was a transparent grey triangle with a ragged edge, printed in the upper right corner of the light blue fields. This gave me another transitional element as well as a means of activating that area.

Cube Space

Cube Space developed from an idea to create an image in a square format. The outline of the square was first established with a light blue field composed of a triangular shape in the lower half and diagonal bars in the upper half. Its diagonals created a strong movement from the lower left to the upper right. I introduced a group of blended vertical bars. They both intersected and rested on top of the diagonal bars, providing various interpretations as to their actual location in space.

The large triangular form at the bottom of the print seemed too flat and needed further spatial definition. I printed a grey rectangular form, which broke the curved edge of the triangle. After considering this move, I decided that the curve was an important element. There had been movement with this line and the rectangle disrupted its flow. I then printed a dark triangular field with a curved diagonal, repeating the flow of the light blue form yet in the opposite direction. This form became
a weighted plane in the foreground and interrupted the horizontal of the rectangle.

I then decided to work with the idea of a three dimensional orange cube. The orange strongly contrasted the blues, thus setting them into a separate plane. I printed three floating cube-like forms and gave them further definition by over-printing one of the faces with a slightly darker color. With this added detail, two of the cubes appeared to be rightside up while the third was upside down. They were formed around the vertical bars which passed through them. I decided to print lines extending from one of the cubes into the dark triangular field to stabilize it. It appeared to be anchored as opposed to the other two which floated.
CHAPTER VI

CONCLUSION

In a final analysis of my thesis prints, I felt that each one contributed to an overall learning experience, both artistically and technically. The nature of the project forced me to concentrate my efforts on a group of prints with a central theme. Although I gave myself a broad area in which to create, it was still very challenging working on each image within this definition. My first images required a great deal of thought and outside suggestions to reach a final resolution. By the end of the series I was able to foresee problems before they occurred and to resolve them much faster. I was able to print more difficult areas with greater ease and less waste. At this point, too, I had greatly expanded my palette and my stenciling procedures. I felt that I had made a personal discovery into the nature of the color field through the elements of form, color, and spatial relationships.
Fig. 1. The Snail, Henri Matisse (1953)
Fig. 2. *White Torso*, Henri Matisse (1943)
Fig. 3. Explosion in Red
5. Small P
6. Basic Brown
Fig. 7. Blue B
APPENDIX A

BIBLIOGRAPHY


