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ROCHESTER INSTITUTE OF TECHNOLOGY

**A Thesis Submitted to the Faculty of
The College of Fine and Applied Arts,
In Candidacy for the Degree of**

MASTER OF FINE ARTS

A STATEMENT IN PATTERN

By

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March, 1987

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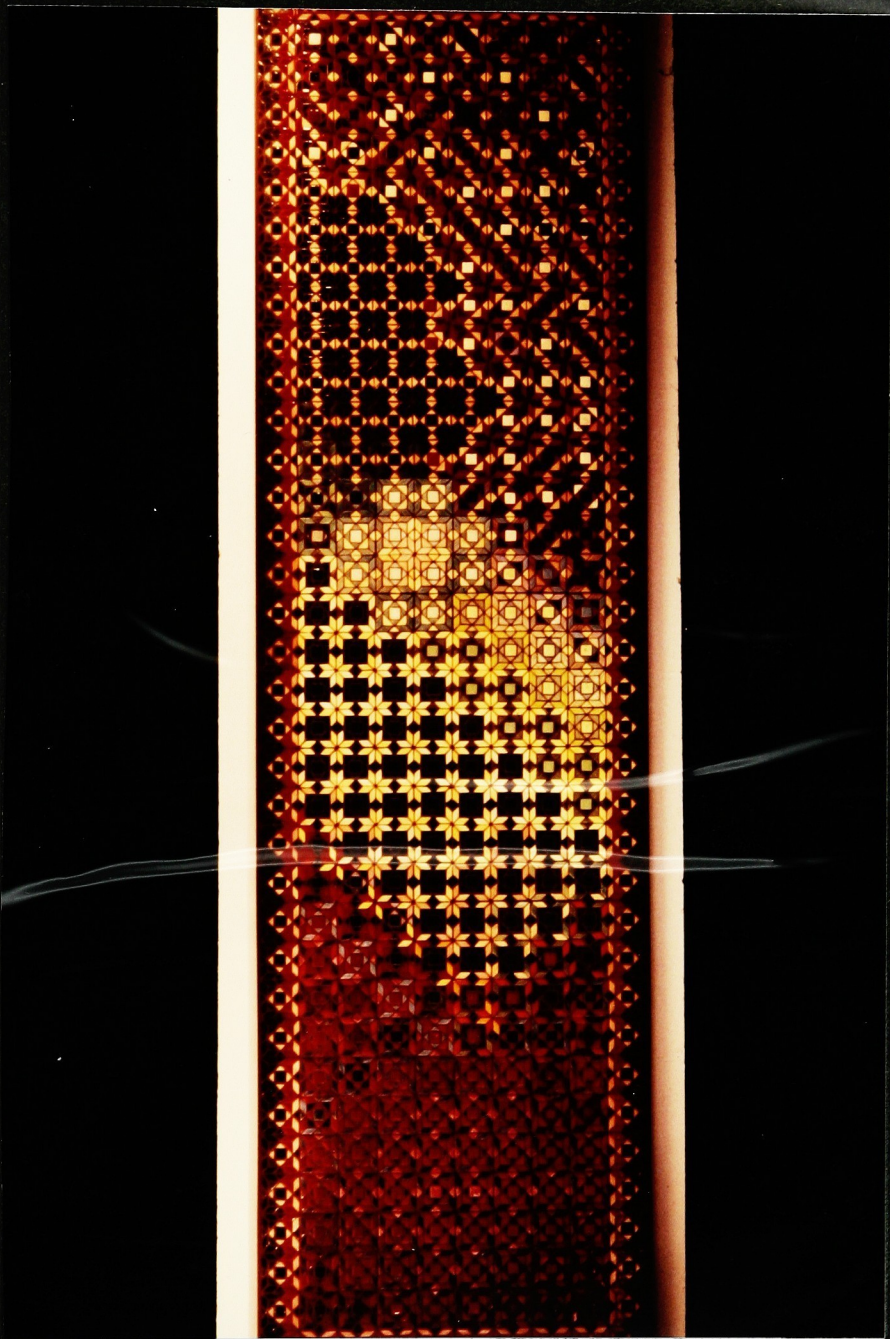


Plate 1

Introduction

While my previous experience with clay entered on the vessel, a long-held interest in painting and pattern suggested a departure from three dimensional work for my thesis. I chose to use low fired earthenware tiles and bright colors in exploring two dimensional surface possibilities.

Themes of change, metamorphosis, and the passage of time have been and continue to be the focus of my work. One way of working with these themes is through evolutions of form or color. This thesis project explores change through the manipulation of an abstract pattern by shifting hue, intensity, and value. The geometric design I chose, while simple on its own, has infinite possibilities when multiples are arranged side by side with variations of color. While the structure or design of the pattern remains constant, its appearance does not. Different elements of the pattern emerge as color changes, subtle or abrupt, suggest new patterns. By creating a metamorphosis from one apparent pattern to the next, I am telling a personal story and, hopefully, a universal one as well.

Background Information and Sources

Influences from several cultures have contributed to the development of my interest in pattern and color.

a. Bedouin in the Sinai Peninsula

The embroidery and kilims of the Sinai Bedouin are highly developed art forms. While working in Egypt, I came in close contact with the producers of finely crafted textiles, rich in color and pattern. The spinning and weaving project I worked with in the Northern Sinai desert was aimed not only at

creating economic opportunity for Bedouin women, but also at reviving a dying art form. The job demanded familiarity with historical examples so that authentic yet exciting new designs could be made. Through spending hours visiting the homes of weavers accompanied by a professor of Islamic History from Cairo, I developed a sense of what constituted “good design” in Bedouin kilims.

The Bedouin kilim (Plate 2) a carpet without pile, is obviously made to delight the eye as well as exhibit the skill and inventiveness of its maker. Teeming with activity, its reds blues, and greens stand in stark contrast to the colors of the desert. Varying shades of maroon, blue, and black react with lighter colors and undyed white yarns to create an electrifying presence. Nothing is static. Dynamic asymmetry is created as white stripes off-center in the visible warp yarns are balanced by white elements in the intermittent weft patterns.

The weavers, when asked how colors are arranged, respond using the Arabic verb “fatah” (to open). What this means in practice is that colors of similar value are divided as often as possible by one distinctly different in value, ensuring a crisp definition of pattern. Improvisation contributes to the unpredictable nature of the color arrangement. When the weaver runs out of one color, another is simply substituted until more is spun and dyed (which may or may not match the color originally used.) If dyed yarn is available it is used. A limited color palette is equated with a lack of financial resources, since dyeing is the most expensive aspect of the rugmaking process.

The traditional embroidered dresses (plate 3) of Bedouin women are full of surprising arrangements and combinations of color. New nylon, commercial threads, electric greens and hot pinks, scattered throughout the



Plate 2



Plate 3

more traditional red and blue embroidery, while offending my Western taste, brightens their palette and gives them the intensity they want.

This experience with and observation of North Sinai textiles opened up new ways for me to look at color relationships and changed irrevocably my color sense.

b. Islamic Architecture

Through first hand exposure to many Islamic architectural masterpieces, from the Alhambra in Spain, through Turkey, the Middle East and on to the Moghul monuments in South Asia, I gained an appreciation for and an interest in tile patterns. Terra cotta tiles are used ubiquitously in Islamic architecture to "articulate fascades, break up flat walls, frame doorways and windows, and enhance the splendor of the mihrab* area and of the domes inside and out."¹ Geometric and organic motifs cover and fill surfaces and niches, emphasizing the ongoing pattern rather than individual tiles (Plates 4 & 5). This tessellation, in which the overall pattern is built of interlocking, repeated parts, is fundamental to the ornamentation of Islamic architecture. "Ornament is of the very essence of the architecture; it is not something applied to the buildings, it is integral to them."²

In my mural, similar tessellation allows one pattern to flow into the next, changing continuously.

*The mihrab is a niche in the interior of a mosque set in the wall facing Mecca.

¹J.G. Davies, Temples, Churches, and Mosques. (Basil Blackwell Publisher Limited 1982), p. 129)

²Ibid.



Plate 4

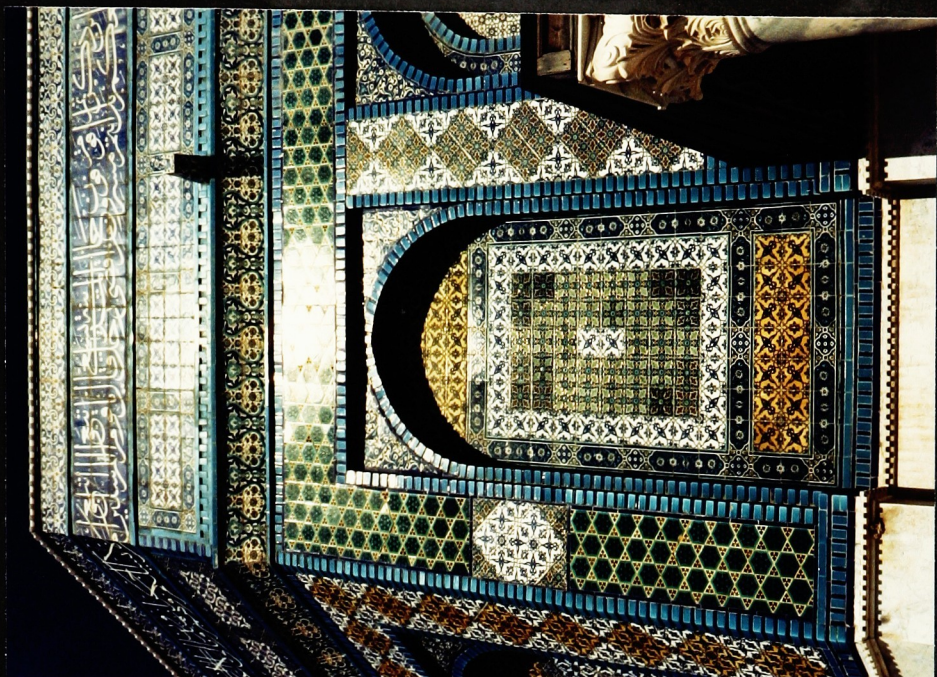


Plate 5

c. The Prayer Carpet

Islamic prayer carpets and illuminated manuscripts make extensive use of intricate borders. In many cases these borders are used to isolate an area from the outside or to provide a window to look through, intensifying the importance of that which lies within. The prayer carpet border usually provides an indication that one end should face Mecca, orienting the user toward the holiest city of Islam. The prayer carpet, then, gives direction and provides the user with a feeling of being in a realm separate from the usual or mundane, a realm of contemplation. I have attempted to create a similar suggestion of contemplation in my mural. The border I have used tessellates into the patterns of the mural yet functions to separate the piece from its surroundings.

d. Mennonite Quilts

Another art form influencing my interest in pattern is the pieced quilt (Plates 6 and 7). Mennonites, a Protestant group of which I am a member, have often used quilting as a social activity which strengthened community ties while making something useful as well as beautiful. In childhood and beyond, quilt patterns have been a part of my daily life. The use of a quilt-like motif on the left side of the mural, symbolizes the starting point of my personal metamorphosis.

Concept and Symbolism

This thesis project, while involving a sense of my own history, operates symbolically on other levels as well. The piece was commissioned by Eastern

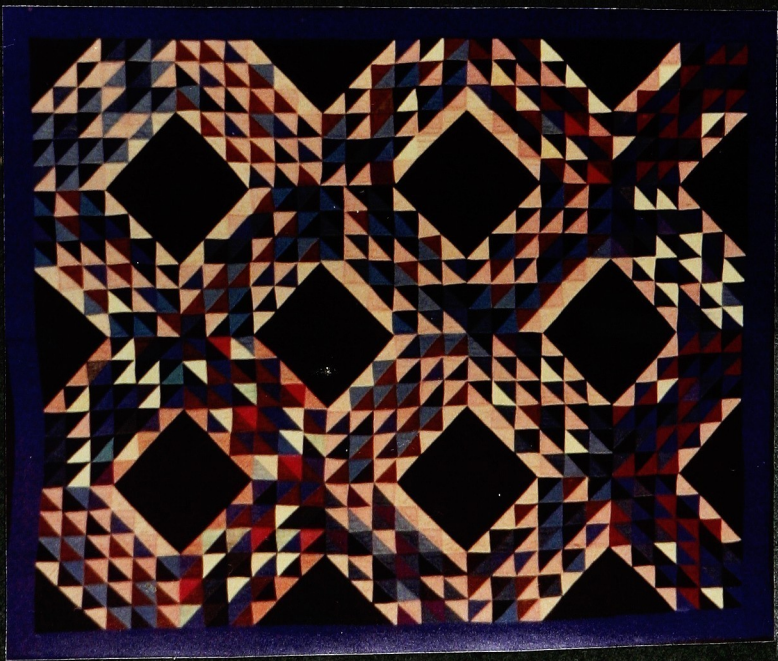


Plate 6

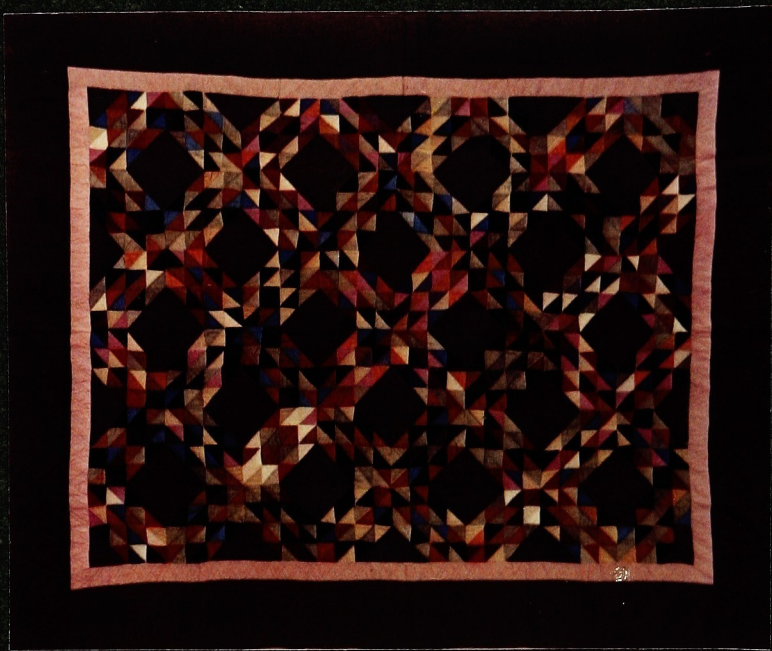


Plate 7

Mennonite College (EMC). It was my intent that an abstract depiction of a personal metamorphosis not only challenge the viewer's imagination but also reflect some of the educational goals and philosophies of EMC. Most of my early life revolved around the EMC campus and I attribute many of my values to that environment. An education at EMC provided opportunities to encounter other cultures, exposed me to new ideas and philosophies, and challenged my faith in God. Education at its best changes the way we perceive reality. It helps us to see the complex relationships that make up our world. The patterns in the mural illustrate these ideas as they change from a traditional quilt motif, through smooth transitions, confusion, clarity, more confusion and complexity to color applications more typical of other cultures.

The Work

The overall color scheme for the mural was approached from a painter's perspective, using color not only to change patterns, but to create movement and unity as well. Color choice for the different components of the tile design determines its readable form. Cool colors, blues and greens, recede while warm, light colors appear to come forward. Variation of intensity and range within the full color spectrum gives each area of the mural its character. All twenty-one elements of the tiles on the left have high intensity and, as a result, fight each other for visual dominance. This destroys any sense of figure/ground relationship, therefore making it possible to see it as many small elements of color, reminiscent of a pieced quilt (see Plate 8).

Moving to the right, sudden shifts create confusion. Then, as the high contrast of dark blue and yellow emerges, a figure/ground relationship asserts itself. A light yellow star pattern emerges on a blue and green background. A

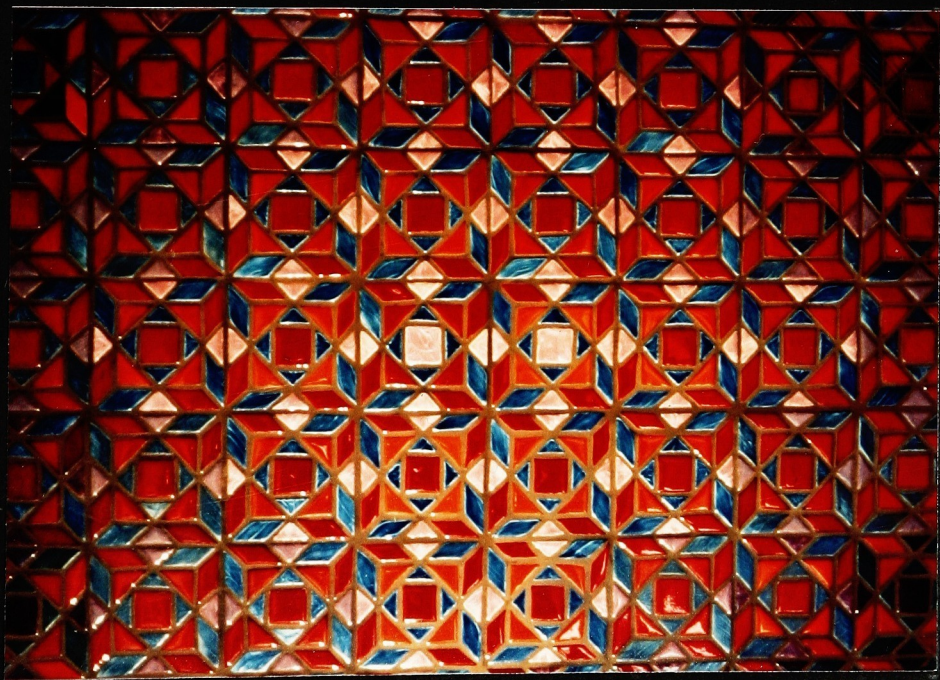


Plate 8

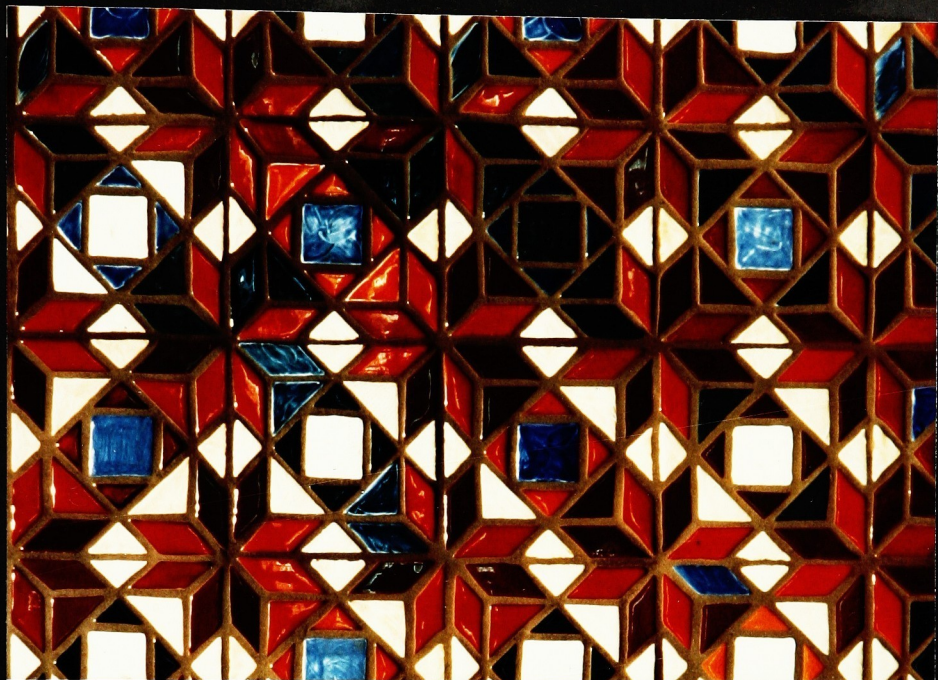


Plate 9

more subtle shift then begins toward a more uniform lightness, not only pulling the image closer, but also allowing the square tile format to emerge. The culmination of this occurs where strong value and color changes introduce lines of separation between tiles, forming a Greek cross (see Plate 10) as a focal point. The right edge of the cross, being a more abrupt change, creates a sense of movement from left to right.

From that point two new approaches to the tile pattern occur, leading to a clearer but more complex, interweaving design reminiscent of Islamic patterns. By using warm and cool colors, I am creating a pattern that moves over and under itself. Present as well is the unpredictable use of color and white elements which is related to a Bedouin approach to asymmetry and balance (see Plate 9).

Conclusion

This thesis project reflects a synthesis of personal experience and a particular client's needs, merging ideas of change and the process of education with my own understanding of an educational experience at EMC. Pattern became an abstract vehicle for communicating those ideas. The various applications of the pattern reflect the changes I experienced as a result of my education there.

This synthesis did not happen overnight. An important element was the length of time it took to develop the idea. Arranging and rearranging the completed tiles frequently led to new ideas or made me think about the piece in a different way. The process itself effected the final configuration of the piece. So change was not only the subject matter but was also integral to its production.

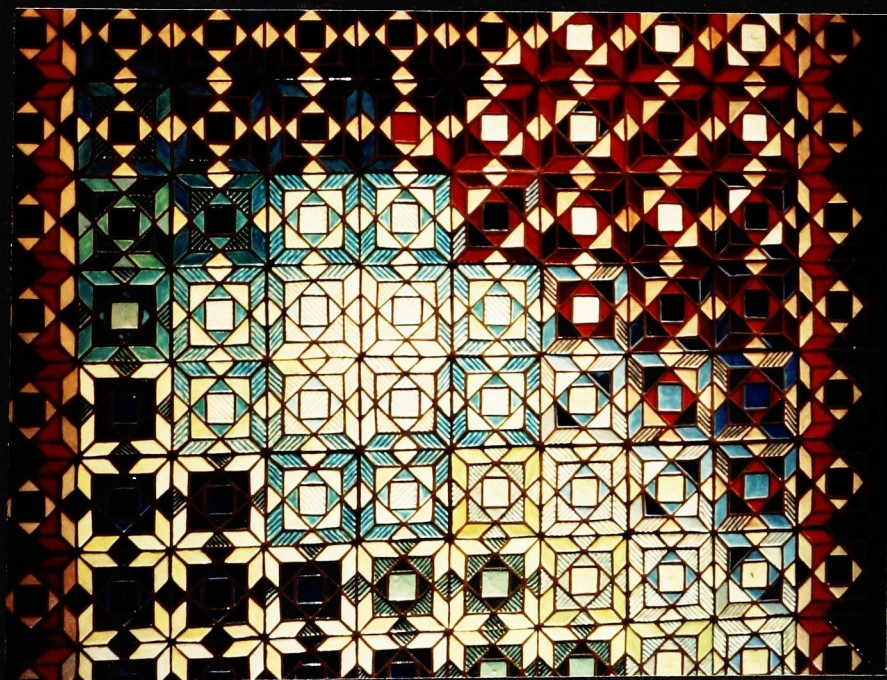


Plate 10

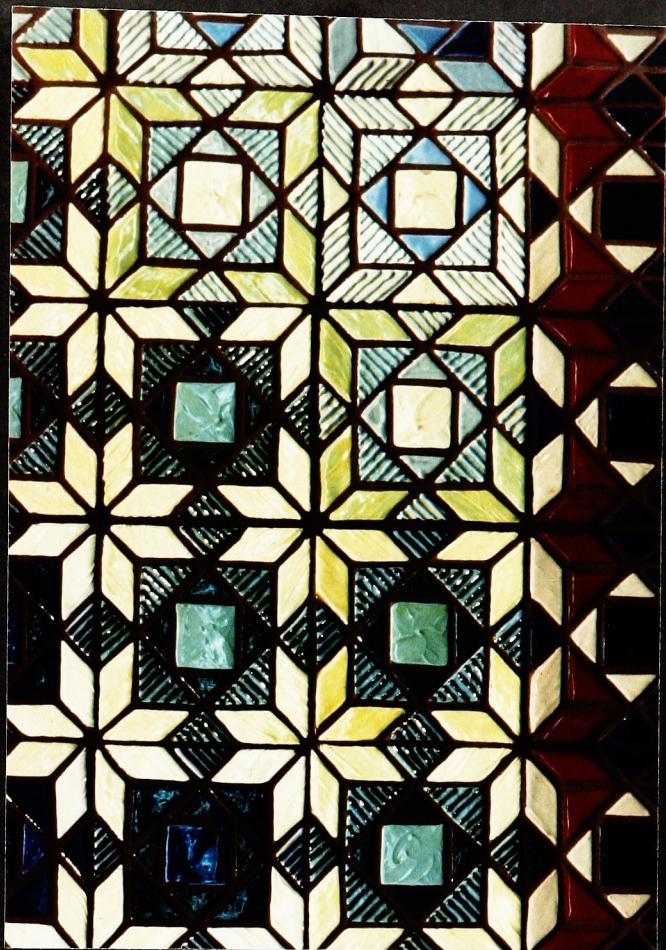


Plate 11

I believe this work is successful to the degree the viewer can relate to it in light of his/her own experience. It is my hope that the changing patterns in my mural become metaphors for the viewer's changing experiences, providing new perceptions of life.

Appendix A – Technical Information

Slip Trailing and Tile Formation

When a precise color or value was required for which I had no corresponding glaze, I used slip trailing in a pointilist application to achieve it. Thin parallel beads of white or colored slip trailed over a solid slip color make gradual transitions of color possible. Slip trailing causes a variation in glaze thickness so that the color of the slip shows lightly through the thin application of glaze over the raised lines. This technique allows the eye to blend the colors at a distance, while adding interest and texture to the piece when viewed up close.

The clay is an earthenware body which I developed while at RIT. (See Appendix C for clay, slip and glaze formulae.) To produce dimensionally consistent tiles, I made four identical plaster molds. Slabs of clay were cut with a harp-style cutter to an approximate size. These were smoothed with a flat metal rib and immediately trimmed by cutting around a matboard template to the dimensions of the mold. While still wet, the clay was packed into the mold and pressed down with a plaster form, molded to leave grooves in the back of the tile. These grooves ensure air circulation during drying and firing which reduces warpage. Another warpage reduction technique is stacking tiles with paper towels between them so that they dry slowly. The paper towels also maintain clean colors after slips have been applied.

Glaze Firing

All firing was done in electric kilns to ensure an oxidation atmosphere. A combination of original and commercially prepared glazes was used. The



Plate 12

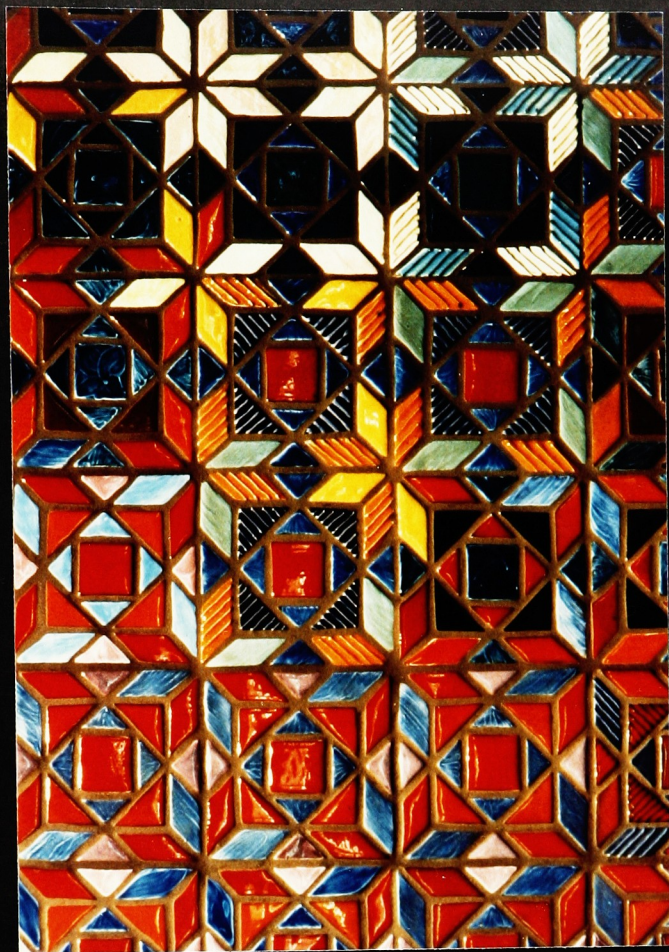


Plate 13

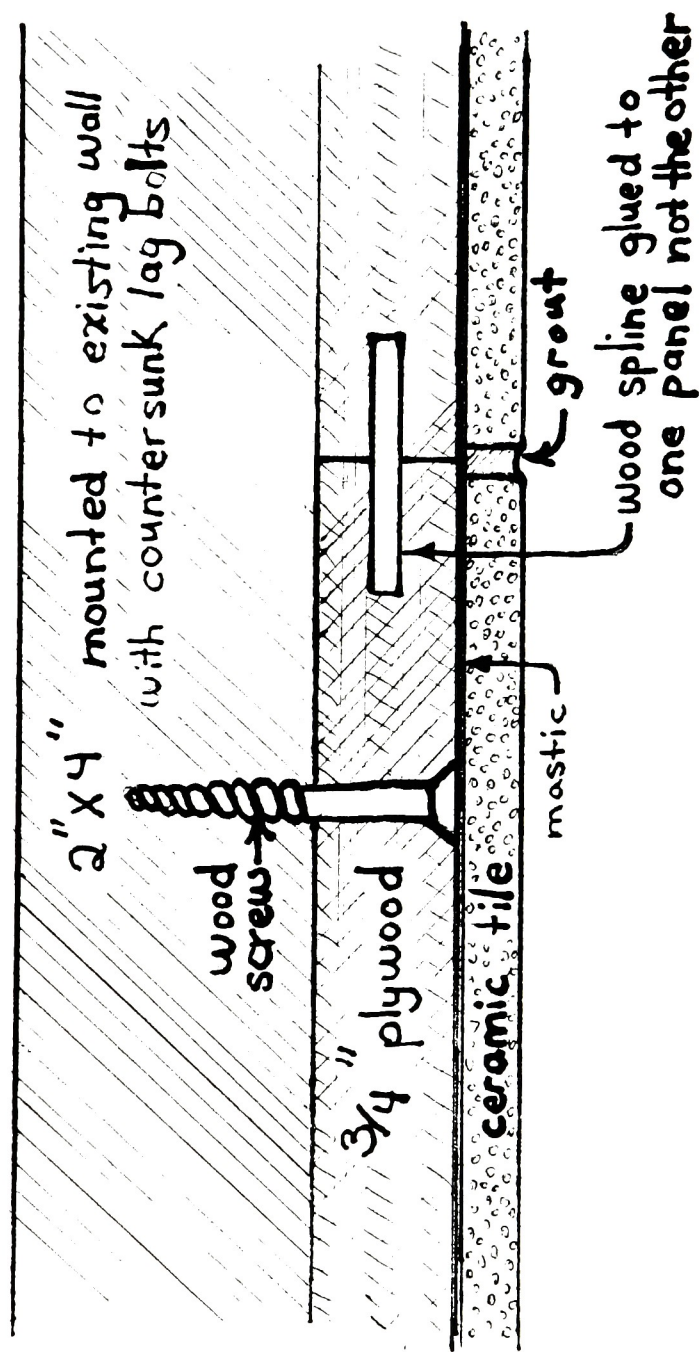
custom mixed glazes were fired between cones 03 and 04. The commercial glazes worked best if fired between cones 07 and 06. This meant that two firings were required for all tiles demanding a combination of the two types of glazes. Oranges, reds, and mauves were commercial glazes and all greens, blues, yellows, and tans were achieved either with oxides in a cone 04 glaze or a combination of colored slip and transparent glaze. Mason stains and oxides were used to color slips.

For the best color response from the commercial glazes the kiln had to be cooled as rapidly as possible before losing red heat. Tight kiln loads meant slow cooling and necessitated opening the kiln door for approximating ten minutes upon reaching the desired temperature.

Installation

The tiles are mounted to 3/4" plywood with tile mastic. There are nine 2'×5' vertical panels with forty tiles on each. A tongue and groove system connects the panels and ensures that no cracks develop in the grout line at the panel seams. Three rows of 2×4's, mounted horizontally, are anchored to the wall with lag bolts. After the plywood panels were screwed to the 2×4's, the final tiles were mounted over the screws and the whole piece was grouted. The ends of each supporting row of 2×4's are beveled slightly toward the back and painted black. These bevels allow the piece to "float" out from the wall 1/2".

TOP VIEW DIAGRAM OF INSTALLATION



Appendix C

Glazes Cone 04-03

<u>Soda Blue</u>		<u>Worthington Clear</u>	
Frit 3110	76.3	Gerstley Borate	55.0
Gerstley Borate	5.7	EPK	30.0
Flint	10.0	Flint	15.0
EPK	7.1	add: Mason	
add: Copper Carb.	3%	vanadium stain	3%
		Rutile	2%
 <u>Clear Boron</u>		 <u>Ians Clear</u>	
Gerstley Borate	90.0	Frit 3124	80.0
Flint	10.0	EPK	10.0
		Nepheline Syenite	10.0
		Bentonite	3%

Clay and Slip Cone 04-03

<u>Red Tile Body</u>		<u>White Slip</u>	
Redart	50	Custer Feldspar	25.0
Fireclay (NARC)	20	Tile No. 6	25.0
Ball Clay (OM4)	10	Flint	25.0
Talc	10	Nepheline Syenite	12.5
Medium Grog	5	Ball Clay (OM4)	12.5
Fine Grog	5		
add: ¼ cup Barium per 100 lbs.			



Plate 14

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