PHOTOGRAPHIC IMAGES ON CERAMIC SURFACES
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The major and minor areas in my graduate program are ceramics and photography respectively. Photographically, I have concentrated mainly in the area of special effects (manipulating the original full tone negatives onto Kodalith film to get other than a usual print). Because of my interest in these areas, I felt it would be interesting to explore the use of different photographic techniques on ceramic surfaces, and thus developed the topic for this paper. To carry out my topic, I made several pieces using various photographic techniques. For this paper I chose the following projects to write about: an oval plaque using a color posterization process, an oval plaque using a tone line - bas-relief process, a camera using a solarization - tone line process, and a card table using full tone images.

Color Posterization

Posterization involves the breaking down of the original full tone negative into different densities on Kodalith film. These densities, when printed, will produce different value areas. Color posterization is printing the transparencies of different densities using color filters, or in this case, glazes.

The portrait was taken on Plus-X 4x5 inch sheet film. Very contrasty lighting was used to separate the sides of the face.
A hair light (kicker light) was used from behind and to one side to bring out a highlight in the hair which made it the same density as the lighted portion of the face and therefore the same color in the final posterization.

The original black and white full tone negative was contact printed onto Kodalith film at different exposures and processed for the same length of time. (Kodalith film breaks down an image to make either completely opaque or completely transparent areas on the negative. All middle tones are lost.) The different exposures through the full tone negative yielded different densities on the Kodalith film. Exposure times of 5 seconds to 35 seconds were used. Five different exposures were made from the original negative. This gave a greater range of densities to choose from. From these transparencies #1 and #3 were used for the negatives and transparencies #4 and #5 were used for the positives. Transparency #2 was not used because of its closeness of density to transparency #1 (see illustration, page 6). Contact prints had to be made from transparencies #4 and #5 to get reversal of densities.

Choosing the positives and negatives that would be used is an important step. Densities which are very close to each other will not separate areas of color. If a positive and a negative of transparency #3 had been used, they would have matched up exactly and there would have been no clear area down the middle of the face. Either way would work, but for this piece I wanted the separation of colors to produce the clear area.
The 4x5 inch Kodalith positives and negatives were enlarged onto 11x14 inch Kodalith film to the size they would appear on the ceramic plaque. This enlargement made the positives negative and the negatives positive. A line texture screen was placed on top of the Kodalith film to produce the line pattern on the 11x14 inch Kodalith film. Light was not transmitted through the opaque areas of the texture screen. The screen was placed at different angles to the image for the different exposures. By having the line pattern at different angles the color of the lower transparency showed through the color of the upper transparency and also formed a textural pattern. (The line screen was made with a Letraset line pattern which was transferred to a sheet of mylar. A variety of texture screens may be made by this method. Having a selection of texture screens to choose from gives a greater chance for a successful print. The mood and character of a subject can change with various texture screens.)

The four transparencies were contact printed onto Colorgraph Screen Process film. Colorgraph Screen Process film consists of a paper base coated with a gelatin emulsion which washed away in warm water. To produce the photographic image a transparent positive was needed. The transparent parts of the positive transmitted light to the emulsion which did not wash away in warm water. By washing away the unexposed areas, the photographic image became a negative. When screened with the Versa Color oil base glazes onto decal paper, the negative photographic image became positive.
Each of the four colors had to be in register with each other when screened. The least dense of the four transparencies was to bring out the highlights, and was screened yellow. However, the yellow glaze was very pale and did not show well over the red. Two coats of Ceramic Clear Coat were screened over the image. The Ceramic Clear Coat formed the actual decal.

The decal was placed in water until it began to release. The decal would not release freely so the thumbs were used at one end pushing on the decal, working slowly back and forth until the decal had released completely from the paper backing. A damp sponge was wiped over the area to which the decal was to be placed. This allowed the decal to be moved around on the surface for the proper alignment. The decal was then slipped to the end of the paper, placed on the ceramic piece, and slid into position.

A large flat surface was needed for the posterization portrait. The plaque was patterned after the old oval picture frames. The plaque was made by rolling out a slab of clay, cutting it to shape, and pinching pieces of clay onto the slab in two rows. After the bisque fire it was glazed matt white with a spray gun from the left side only. This glazed only a portion of the frame onto which the gold luster was to be applied later. The plaque was fired to cone 9. The decal and luster was fired to cone 019. The gold luster applied to the glazed areas of the frame offered a contrast to the clay body.

The initial thought behind this project was to combine the old type frame with the newer photographic technique within. The
frame itself only resembles the old type frame in that it is oval and has a gold luster. The construction of the frame gives it a sharp feeling that relates to the definite block areas of the color posterization within. Yet the piece when viewed as a whole is subdued by the glaze behind the portrait and the clay body is visible on parts of the frame.
Tone Line - Bas-Relief

The original negative was taken on 35mm Plus-X film. The full tone negative was then enlarged onto 4x5 inch Kodalith film to produce a positive. The Kodalith positive was then contact printed onto another sheet of Kodalith film to produce a negative.

The positive and negative transparencies were then placed together, emulsion to emulsion, and shifted slightly out of register. Another sheet of Kodalith film was then placed under the two transparencies to produce the tone line - bas-relief. The tone line - bas-relief was then contact printed with another sheet of Kodalith film to get the reversal of densities. This image was projected onto 11x14 inch Kodalith film to the size needed for the silk screen process.

The silk screen and decal processes were the same as explained in the previous project.

The plaque was made in the same manner as the one used for the color posterization, except the frame was smoothed out and textured with a wooden tool. After the bisque fire it was glazed with a matt white glaze and fired to cone 9. The luster was brushed on leaving the impressed areas white. The decal and luster were fired at cone 019.

The photographic image on the plaque does not stand out as much as I had planned. If the glaze had been applied heavier, the surface would have been white, giving a better contrast for the black lines. This would have made the photograph read better from
a further distance, but would also have given it a completely
different character. Perhaps it could have been slightly lighter,
but a white background would have given more contrast than I wanted.

The idea for this piece was the same as for the piece used in
the color posterization. The frame was made more in the style of
the old type frame because of the photographic image that was to
be used within. The photographic subject itself was old.

I feel the line quality of the house breaks the structure
down to its framework and gives the image a majestic, mysterious
quality. The background glaze subdues the power of the photographic
image a little more than I had wanted.
Tone Line - Bas-Relief

Reversal of Tone line - Bas-Relief
Solarization - Tone Line

The original negative was shot on Plus-X 4x5 inch sheet film. This film was then contact printed onto Kodalith film. The sheet of Kodalith film was developed full term, exposed to white light for a fraction of a second (emulsion side toward the light), then developed for the full time again.

The solarized positive was contact printed onto Kodalith film to produce negative #1. Negative #1 was then contact printed onto Kodalith film to produce negative #2. Negatives #1 and #2 were placed together, emulsion to emulsion, and another sheet of Kodalith film was placed under the two transparencies. To produce a tone line the areas of densities on the positive and the negative transparencies must be equal. If one is not as dense as the other, there will be large block areas on the negative rather than lines. The principle of tone line is that the positive and negative transparencies in perfect register block out each other. By rotating the registration frame at an angle, the light can get between the areas of densities exposing the film below with lines only.

The 4x5 inch negative size was the size needed for the camera back so it was contact printed with the Colorgraph Screen Process film. The silk screen process was the same as was explained in the first project.

The camera is a surrealistic piece and needed more than a full tone image to be placed on the ground glass area. The solarization - tone line fit more closely with the character of the piece because
it demands that the viewer fill in the details of the image.

The camera was constructed very realistically with the exception of the eye for the lens, the finger that comes out of the bellows through the front of the camera to push the shutter, and the fingers for the carrying strap.

The glazes and luster used were also the colors of the camera the piece was modeled after. Blue was used for the eye to emphasize the lens—the most important mechanism of a camera.

The camera was constructed of stoneware clay. After the bisque fire it was fired to cone 04 with Tru-Fire underglaze colors. The luster was fired at cone 019. Later, the decal was put on and also fired to cone 019.
Contact from Solarized Negative

Reversal of Contact from Solarized

Solarization Tone Line
Full Tone Image

I saw face cards as a good subject to work in photographic images. The cards are very detailed and colorful in their design. The piece needed more than just the cards to make it active, so the hands holding cards and the bridge layout were added.

The slabs for the cards forming the table top were rolled out and the design drawn in with a wooden tool. The faces were left blank for a decal to be put in later. The hands were modeled and textured with a wooden tool by a fellow graduate student, Dale Peterson. The ashtray was thrown on the potter's wheel.

The hands are larger than the scale of the rest of the piece. They had to be large to handle the bulky playing cards.

After the bisque fire the cards were glazed with a matt white glaze and fired to cone 9. The Tru-Fire glazes were then applied and fired to cone 04. The decal and luster firing was at cone 019. The pieces on the table were fired at cone 9.

The table frame, 24x16x20 inches, was made of 3/4 inch angle iron which was welded together. A masonite board was placed beneath the cards for support.

The original negatives were taken on 35mm Plus-X film. These were then enlarged onto 4x5 inch Kodalith film to the size needed for the faces. A Kodak half-tone dot screen was placed over the Kodalith film to allow the positive transparency to retain its full tone image.

A tone line photographic image may have fit the more linear
quality of the design, but I chose a full tone image because I wanted the realism of the faces to contrast with the usual linear card faces.

The silk screen and decal processes were the same as explained in the first project.

The piece has no single point of interest. The hands are large which draws attention to them, the character of the dummy hand and the ashtray brings interest there, and the cards are highly decorated, brightly glazed, and contain the photographic images which draw the eye to them.
I look at photography as a two-dimensional art form as I look at ceramics as a three-dimensional art form. Combining the two successfully is my concern. I believe a photographic image should fit the piece it is placed on. A photographic image that is related to the piece it is on can be dominant, but I believe the relationship between the two gives the whole piece unity.

The images as I wanted them could only be accomplished photographically. Glazes could be brushed on to form an image, but the result would not be as clear nor as precise as a photographic image.

I feel the projects mentioned in this paper are valuable artistically because any new approach broadens what can be expressed in an art form.

I intend to continue to explore the possibilities of combining photographic images and ceramics. The surface areas can be greatly varied. In addition to flat, smooth ceramic surfaces, other suitable surfaces could be cylindrical, irregular, textured, and so on. Photographically I will continue in the area of special effects as well as full tone images. An interesting project would be the relating of various images produced by different photographic techniques on a single ceramic piece.