

Research of Printmaking techniques, a Synthesis of the New with the Past

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The objective of my undergraduate research grant was to explore the realm of printmaking. Specific printmaking techniques and content in color intaglio, chine colle, lithography, and intaglio were investigated through museum, academic, and studio research. In addition to this research a personal interview was granted to me by the internationally known printmaker Mauricio Lasansky.

During my research I traveled to Milwaukee, Iowa City, Cedar Rapids, and Chicago. While visiting the Milwaukee Art Museum and the Chicago Institute of Art I studied the works of such artists as Pablo Picasso, Salvador Dali, Durer, Goya, Rouault, and Kathe Kollwitz. One artist who's appeal against oppression, war, and hunger which had a profound impact on me, was a German born citizen Kathe Kollwitz. Having lived through World War I and World War II in which she lost both her son and grandson, her work displays great emotional intensity for the atrocities of war and human suffrage. Kollwitz achieves a realistic rendering of the human spirit through the use of etching, soft ground, aquatint, and engraving. Along with intaglio, Kollwitz also explores other dimensions of printmaking such as lithography and woodcuts.

The Cedar Rapids Museum of Art and the Iowa University Art Museum has a majority of Mauricio Lasansky's art collection. Lasansky, originally from Argentina, displays great passion and virtuosity in the handling of multiple plate technique in intaglio. Lasansky who is internationally recognized for his art, was dubbed by TIME magazine in September of 1962, "the nation's most influential printmaker", and his university studio "the printmaking capital of the United States". His workshop and its many students are a critical part of Lasansky's legacy. He has received five Guggenheim fellowships, more than ever granted one individual. He is represented in more than 140 public collections; has been the subject of more than 200 one-person exhibitions: and is the recipient of 6 honorary degrees.

In the early 1940s Lasansky was affiliated with William Hayter's Atelier 17 where he created side by side with other internationally known artists such as Picasso and Chagall.

One of Lasansky's students, and now a professor in our art department is Joel Elgin. His work and his approach as an artist brought to me a new medium in which to express myself with intensity. As a contemporary artist Elgin is always developing new pathways in printmaking techniques while remaining true to the meaning of the image. Elgin's strong use of color reflects a sense of energy and movement in his work. His development of a chemical solution called the "magic Joel solution" allows for an innovative approach to the figure giving it a more lively painterly appearance.

Techniques that were studied through various artists include dry point, line etch, engraving, soft ground, hard ground, spit biting, multiple plate color intaglio, chine colle, lithography, color lithography, and the combination of color lithography with intaglio.

These processes were carried out in the form of the prints enclosed in this book.

The first step in preparing a new copper plate for dry point or engraving is to bevel the sharp edges and corners. For etching the copper is first coated with an acid-resistant substance. Asphaltum, a hard ground is used when a longer etch is required as it does not break down as easily as a soft ground would. The ground is then drawn upon with an etching needle, which exposes the metal wherever the point breaks through the ground. Variations of tone are produced by hatching, cross-hatching, or stippling with a dry point needle and various mezzotint tools.

Next, the plate is set in the acid bath so that the exposed areas drawn by the needle are bitten into. The acid bath is a Dutch Mordant mixture of 880 grams water, 100 grams hydrochloric acid and 20 grams potassium chloride. The length of time in the acid varies upon the desired width and depth of the bite.

Finally the remaining ground is removed with solvent and the plate is prepared for aquatinting. The effect of aquatint is to produce solid areas of tone. To retain ink and print a tonal value, the area must be pitted to a greater or lesser degree by the aquatint process. Before etching takes place, particles of rosin are dusted on a clean plate. They are then heated until they melt, adhering to the metal surface. The acid bites into the plate around each acid resistant particle, roughening the surface so it will hold the ink. The longer the plate remains in the acid, the darker the tone will be.

The scraper and burnishing tool is used after the etching process to shave off surface metal, make corrections, and produce a variety of tonal work.

For intaglio work the paper must be dampened to soften the fibers and allow it to be pressed into the grooves of the plate in order to pick up ink. When ready to print the ink is applied to the plate with a palette knife. The object is to cover the entire plate surface and push the ink into all of the lines and crevices of the plate, this is accomplished with a brayer. A tarlatan is then used to wipe the plate until an acceptable plate tone is left. After making sure the edges of the plate have been wiped clean, the plate is then laid on the press bed. As in the case of multiple color technique, it is important to use an accurate registration technique. The lightest value and the least viscous inks are printed first.

The plate is then run through the press while ensuring equal stretch of the blankets to reduce the risk of creasing the paper. The paper is then lifted slowly from the first image, and the second plate, second lightest value is then registered onto the press bed. The arch's paper is then registered back onto the plate. Registration can be checked by feeling the embossment produced by the first plate, and its alignment with the second plate. The printing process must be done with reasonable speed or the paper will dry, the registration will then be inaccurate, and the ink will act as an adhesive, pulling fibers from the paper. Upon completion of the last run the final image is pulled. When working in multiple plate technique, a separate plate is used for each color. The tonality of each color must be considered as must the combinations of color produced by overlapping.

The technique of chine colle, a thin sized handmade paper, is employed for applying cut or torn shapes that become part of the image. The chine colle paper is dampened and brushed with a methyl cellulose adhesive. It is then placed quickly onto the inked plate and run through the press with a dampened backing sheet.

In lithography, graining the stone removes any previous image, levels the stone and gives the bavarian limestone surface a fresh tooth for drawing. Graining is done by rubbing the stone with an abrasive using a levigator. Limestone has a natural affinity for

grease. When the limestone comes in contact with lithographic drawing materials the alkaline nature of the stone reacts with the fatty acids in the grease to form an oleomanganate of lime that serves as a base for the ink. The stone is then etched with a combination of gum arabic and nitric acid. When ready to print in lithography the paper is laid on top of the image and a blotter and tympan is added. Press pressure is then adjusted accordingly to the stone size.

The stone is then run through the press and the final image is pulled. As in the case of the print "Absurdity", a two color lithograph combined with an intaglio plate, two stones were prepared and etched. Printing was done with a twenty-four hour break in between images to allow the previously printed inks to dry. Like multiple plate intaglio, the overlapping of colors had to be taken into consideration with the intended final image. A special mean of registration in "Absurdity" had to be produced as this image was printed three times on two different presses.

The findings of this research grant are demonstrated in the prints that follow. Because of this Undergraduate Research Grant I have had the opportunity to explore vast numbers of artists and the techniques they employed, meet internationally recognized artists, and combine these experiences into my own art.



I have become aware: earth breathes, smells, listens, feels in all its little parts; it adds to itself, couples itself, falls to pieces and finds itself, enjoys what life is, and seeks the logical philosophy of all, all in all; days and years of all transitoriness, as far as one wishes and is able to think, as far as the spirit of beings is with great contents; through our air our light, (the earth) has become something or many things, even to creators who are necessary, and has partially perished, consumed in itself, back into itself again, and begins the smaller or greater cycle, everything that I want to call divine germinates anew and brings (forth) and creates, out of the power which few see, a creature.

Egon Schiele

Print 1

Apeiron

7.25 x 9.75

1997

Five Plate Color Intaglio,

hard ground, etching, line etch, spit bite, dry point, scraping, and burnishing.

Everyone works the best way he can. I am content that my art should have purposes outside itself. I would like to exert influence in these times when human beings are so perplexed and in need of help. Many people feel the obligation to help and exert influence, but my course is clear and unequivocal.

Kathe Kollwitz

Print 2

“Blood Bride”

18 x 24

1997

Five Plate Color Intaglio

Line etch, etching, hard ground, scraping, and burnishing.



If I must place my trust somewhere, I would invest it in the psyche of sensitive observers who are free of the conventions of understanding. I would have no apprehension about the use they would make of these pictures for the needs of their own spirits. For if there is both need and spirit there is bound to be a transaction.

Mark Rothko

Print 3

untitled

18 x 12

1997

Three plate color intaglio.

Line etch, dry point, engraving, hard ground, spit bite, dremel tool, scraping, and burnishing.

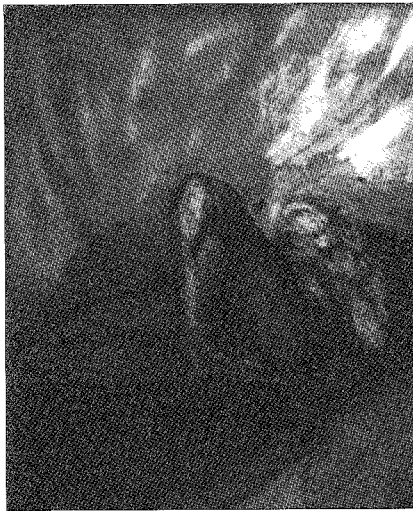


Every person always finds in each work of art only that for which his sole has prepared him, there in lies the strength and inexhaustible quality of a work of art.

Alexj Jawlenski

Print 4
 "Loneliness"
 11.75 x 17.75
 1998

Intaglio with Chine Colle
 Line etch, engraving, spit bite, scraping,
 burnishing, and chine colle.

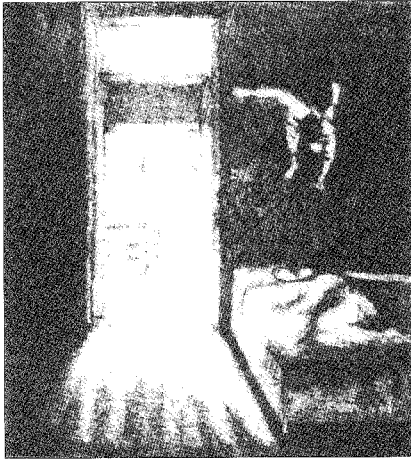


In order for the human community to benefit from the contributions of the artist, it must learn the language that he uses in his work. In order to understand what is said in a language, you first have to learn that language...I believe that these days, to elevate humanity by means of art, there is no need to look for realism, naturalism, or formal materialism, but on the contrary, to touch the essential in the poetic forces that are in man.

Alberto Magnelli

Print 5
 "Reclining Nude"
 12 x 10
 1997

Intaglio with Chine Colle
 Etching, line etch, soft ground, hard ground,
 spit bite, scraping, burnishing, and two chine colle papers.



I believe that nothing can be more abstract, more unreal, than what we actually see. We know that all that we can see of the objective world, as human beings, never really exists as we see and understand it. Matter exists, of course, but has no intrinsic meaning of its own, such as the meaning that we attach to it. Only we can know that a cup is a cup, that a tree is a tree.

Giorgio Morandi

Plate 6
 "Waking"
 11 x 10.25
 1998
 Lithograph

*Everything for today,
 nothing for yesterday,
 nothing for tomorrow.*

Francis Picabia

Print 7
 "Absurdity"
 16.75 x 10.75
 1998

Combination of two color lithographs with intaglio plate. Aquatint, line etch, hard ground, etching, scraping, and burnishing.



ACKNOWLEDGMENTS

I wish to express my gratitude to Joel Elgin for the assistance and inspiration he has given me through the years. I would also like to thank the Undergraduate Research Grant Committee for giving me this rare opportunity. This grant has been a spring board for me to better my understanding and direction in the field of printmaking.

LIST OF UNDERGRADUATE RESEARCH GRANT PRINTS

- Print 1 "Apeiron" 7.25 x 9.75, 1997
- Print 2 "Blood Bride" 18 x 24, 1997
- Print 3 untitled 18 x 12, 1997
- Print 4 "Loneliness" 11.75 x 17.75, 1998
- Print 5 "Reclining Nude" 12 x 10, 1997
- Print 6 "Waking" 11 x 10.25, 1998
- Print 7 "Absurdity" 16.75 x 10.75, 1998