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Handmade Watercolor Paper

Anne Zyla

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Papermaking process. Anonymous woodcut.
ROCHESTER INSTITUTE OF TECHNOLOGY

HANDMADE WATERCOLOR PAPER

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

BY

ANNE HARRIS ZYLA

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PREFACE

This paper is not intended to be a technical treatise on hand papermaking as it relates to chemical properties or procedures. It is, quite simply, my own experience in learning about and attempting to produce a heavy stock handmade watercolor paper.

There were two incentives which motivated me to try the experience: as a watercolorist who prefers 300 lb rag paper and as the possessor of two small moulds and deckles, I often wondered how the paper was made, and I had an important piece of equipment necessary to find out.

What follows is the result of research and actual practice through experimentation.
INTRODUCTION

In China "... Ts'ai Lun, A.D. 105, announced the invention of papermaking to the Emperor."¹ This achievement was as significant to the development of civilization as the invention of the wheel.² The substances used in making this first paper were: hemp, fish nets, mulberry and other barks, and rags.

There are now more than two hundred publications on papermaking. Over 14,000 different kinds of products are made from paper³--some of the more unexpected ones are: buildings (churches, domes, houses), furniture, horseshoes, railroad wheel spokes, carpets, coffins, wash-bowls, and barrels.

Depending on the artist's purpose, handmade paper may be a means or and end in itself. This Thesis will deal with handmade paper as a means and my experience in making paper suitable for watercolor painting.

The key to paper is plant cellulose. All


³Hunter, p. 584.
plants contain cellulose-fibered materials. The materials may be straw, weed, bark, wood, grasses, grains, ad infinitum. Papermaking starts by shredding, cutting, bruising and/or pounding so that the fibers combine with water to form a wet pulp.

The pulp is placed in a vat, and a frame (made of a screen stretched on a wooden frame with a removable wooden cover) is dipped into the vat, lifted, shaken in four directions, allowed to drain, pressed to remove excess water, and then dried.

There are two aspects of papermaking: one is mechanical, the other aesthetic. It is difficult to separate the two procedures because, although paper is shaped at the vat, the composition of the pulp is determined at the beater. The latter determines the quality, color, hydration degree (relative hardness or softness), and fiber length. The former determines the size, shape, and thickness.⁴

I. THE PROCESS

Fiber/Pulp.--When the type of natural fiber has been chosen for the handmade paper, it must be dried and then cut or chopped into short lengths. The fibers are placed in a large container of water to which lye or caustic soda has been added (two tablespoons of caustic soda or one teaspoon of lye to a quart of water) to help eliminate the fleshy parts. The water is brought to a boil and then simmered until the fibers are soft (approximately three hours). The time depends on the kind of fiber used. The pulp mass is cooled and rinsed under running water repeatedly so as to wash out the chemical residue and nonfibrous debris (if cotton linter or rags are used, the boiling and chemical treatment are omitted). The pulp then must be beaten in water, in a beater, to prepare it properly for forming paper.

Beater.--Since pulp is a moist, fibrous mass made from plant tissue, the fibers can be macerated by many different kinds of tools. Handpaper mills which produce on a large scale use a Hollander Beater.\(^5\) Individual papermakers have built their own ingenious beaters or use such available items as: mortar and pestle,

\(^5\) Ibid., p. 61.
hardwood mallet, meat grinder, food mixer and/or food blender to cut, chop, mix, pound, bruise, or otherwise break down the cellulose fibers. When the pulp has been thoroughly beaten, it is ready for the vat.

**Vat.**—The vat must be rustproof, easily cleaned, and much larger than the mould and deckle to be used. The vat may be round, oval, rectangular, or square with either straight or sloping sides (the larger dimension at the top). After pouring the pulp from the beater into the vat, sufficient water must be added to produce the consistency (the pulp stock is then called slurry) needed to form paper on the mould and deckle.

**Mould and Deckle.**—A mould and deckle are traditionally used to form handmade paper. A papermaker's need determines the size of the mould. Basically a mould is a wooden frame with a woven metal wire screen attached. Wooden ribs are attached to the back of the frame to support the screen. The deckle is a removable frame, slightly larger than the mould. It fits over the mould and acts as a wall around the screen to contain the pulp. Hand pressure holds the deckle frame to the mould. With the vat filled with the desired pulp, the mould is held perpendicular to the back of the vat, dipped in bottom edge first, lowered vertically and then brought up horizontally toward the vatman. The mould is raised a few inches above the vat, then shaken (gently) in four directions (left and right, backward
and forward). The shaking action is known as "throwing off the wave" and the purpose is to disperse and close the fibers.\(^6\) Excess water is allowed to drain off, the deckle is removed and the waterleaf (unsized paper) is couched (transferred) to a damp felt.

**Felts.**—Dampened felts (larger than the waterleaf and usually wool) are used in the couching step. Sufficient felts are needed to place between each sheet of paper being made plus extra felts for the bottom and top of the pile of sheets.

**Couching.**—Couching is done by standing the mould vertically at the near edge of the felt, and with a continuous rolling movement, the face of the mould is pressed down on the felt. The near mould edge is raised and the far edge of the mould is standing on the felt vertically before being lifted off. The waterleaf will adhere to the felt but not bond to it. Another damp felt is placed on top of the waterleaf and the initial process is repeated for each sheet of waterleaf desired. The slurry (pulp mixture) in the vat should be checked frequently (every few sheets) and condensed pulp added to maintain consistency.

**Post.**—An alternate pile of felts and waterleafs is called a post. The base of the post is a waterproof board larger than the felts used. When the desired number of sheets of paper are on the post

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another waterproof board is placed on top of the pile and the entire post is transferred to a press.

**Pressing.**—Pressing removes excess water and helps to prevent the paper edges from curling. Ideally the press is hydraulic. A bookbinder's press or standing press are other choices. A clothes wringer or printmaker's press may also be used. Other means of pressing (for small scale work) might be a rolling pin or a heavy glass jar.\(^7\)

**Drying.**—After pressing, the individual sheets are separated and either laid out to dry on their felts or placed on open-slatted or screened racks. Two alternatives are: leaving the paper in the mould to sun dry, or pressing the paper (between blotters) with a warm, dry iron.

**Finishing.**—Paper may be considered finished after the pressing and drying. To achieve a very smooth surface, the paper is put through a process called calendering; the sheets are pressed either between metal rolls or metal plates.\(^8\)

**Sizing.**—Unsized paper is called waterleaf. Sizing is a water-resistant material (introduced to

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\(^8\)Heller, p. 196.
papermaking about A.D. 700)⁹ added to paper. Paper is sized or not depending on the ultimate purpose. Artists using handmade paper as a medium in its own right and printmakers, because they use stiffer inks, may prefer waterleaf. Unsized paper absorbs liquid like a blotter, and some aquarellists choose to have their colors feather and bleed. However, in using the paper as a support for controlled watercolor the paint spreads beyond the intended strokes, and sizing eliminates this problem.

The list of materials used for sizing is varied: animal-hide glue, plant starches (corn, rice, wheat), aluminum sulfate, powdered rosin, synthetic resin, casein, acrylic polymer medium, polyvinyl alcohol, juices of various plants, and unflavored gelatin. One of the most readily available is the gelatin which can be purchased in small packets at a grocery store.

There are two traditional methods for sizing paper. One method (stock sizing) is to include the sizing in the vat when the paper is formed. Sizing, such as unflavored gelatin, is added to the pulp mixture in the proportion of one packet of gelatin to a quart of wet pulp mixed with water.¹⁰ However, the gelatin must be added to a very warm (or hot) pulp mixture or jellied beads will form in the vat and there would be

⁹ Hunter, p. 468.
¹⁰ Studley, p. 64.
no even absorption with the slurry (pulp and water mixture). After forming, couching, and pressing the paper in the usual manner, the felts must be washed with warm water and laundry detergent to eliminate any sizing left in them.

The second method of sizing (surface sizing) is to treat the waterleaf after it has thoroughly dried (at least two weeks so it will not disintegrate during the sizing process). The dry sheets of paper are immersed in a tub or tray of sizing. Heller suggests soaking one and a half leaves of imported gelatin in one pint of water until the gelatin triples its original thickness; then the gelatin is dissolved by warming the mixture in a double boiler. The solution is stirred into three and a half quarts of water, then poured into a large tray. About five sheets of waterleaf are immersed at a time, removed, and pressed lightly. The sheets are separated and in spur (groups) of four or five are dried on glass.11

Immersion time is unspecified in the resource books used. Since surface sizing is supposed to affect only the paper's surface, the papermaker must conclude a very short immersion time is involved—the time might be a few seconds or more, depending on the paper's fiber content, thickness, and intended use. In his book on papermaking technique Dard Hunter states: "The

11 Heller, p. 80.
sizing of handmade paper is a slow and exact process. Individual experimentation seems to be the answer.

It is interesting to note that the three popular textured surfaces for watercolor paper (hot-pressed, cold-pressed, and rough, in order of increasing tooth) were developed by Whatman in England about 1850. The choice of textures appealed to artists but they universally praised the paper for "... its uniquely hard-sized surface, whose properties encouraged the development of techniques of sponging, rewashing, and taking out of highlights by wet processes at the turn of the nineteenth century." Whatman also used gelatin for sizing but he improved on the weakly-sized (gelatin) Western papers which could not take corrections at all because the paper's surface would abrade so easily.

According to Hunter, a very large mechanical sizing machine is used in Europe in the modern handmade paper mills. The machine comprises a thirty foot long wooden tub, twelve inches deep and wide enough to size the largest paper. The machine is power driven and has wooden rollers over which an endless felt passes the

12 Hunter, p. 449.


14 Ibid., p. 18
papers through the size in the tub.\(^{15}\) Hunter also mentions that the relative thickness of paper determines the consistency of the size: "Paper made from hard rags, slightly boiled, will require a thin size at a high temperature, but for paper made from old, soft rags a thick size at a lower temperature will be found better practice."\(^{16}\) So the variables are many and the papermaker learns the craft/art through experience.

\(^{15}\) Hunter, p. 449.

\(^{16}\) Ibid., p. 447.
II. VARIATIONS AND CHARACTERISTICS

In machine-made paper the shaking of fibers in the mould is limited to a side-to-side motion. That action produces a paper which has a definite grain; thus, the paper tears easily in one direction but not the opposite direction. With the four direction shake of handmade paper, there is no grain because the fibers are blended evenly.  

Due to unevenness in drying, handmade paper sheets are not always square. Uneven drying may also produce curls and ripples. "The phenomenon of cockling is a characteristic of all papers to some extent, even of the best watercolor sheets." The hygroscopic (absorbing moisture easily) quality of paper creates problems which constantly plague papermakers.

Separate sheets of the same stock of handmade paper have a tendency to be irregular in weight and thickness. Therefore, rather than being listed and sold by the ream (500 sheets), they are listed by the number of pounds they weigh to the ream. The higher

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17 Ibid., p. 455.
18 Ibid., p. 457.
19 Cohn, p. 23.
20 Hunter, p. 457.
the number, the heavier the paper.

The deckle edge is that irregular edge on all four sides of handmade paper. These edges were, from early days of papermaking, considered a mechanical imperfection and, in Europe, were often trimmed for book-printing.21 Now they are considered a desirable property of handmade paper. Artists find the deckle edge attractive and often frame their work so the irregular edge is visible.

Some of the variations and characteristics of handmade papers (uneven thickness, irregular deckle, and not always being square) are the same attributes which make this paper readily recognized and appreciated. However, these same variations and characteristics can also, on occasion, create problems for the artists using the paper.

21Ibid., p. 456.
III. THE WORKSHOPS

Unfamiliarity with the physical process of papermaking prompted me to attend two Connecticut workshops on the subject. One workshop was exotic, the other distinctly plebian. The former, at the Guilford Handcraft Center, Guilford, was taught by Tim Barrett, who had worked at the famous Twinrocker, Inc. of Indiana. Mr. Barrett has done custom papers for Jasper Johns, Jim Dine, Robert Motherwell, William Wiley and Claus Oldenberg. He was a Fulbright Scholar in Japan and will soon publish a book about Japanese papermaking. Mr. Barrett's equipment was very sophisticated—the beaters, moulds, vat, press, and drying implements were all handsomely handcrafted by him from the finest of woods and metals. The second workshop was held at the Farmington Valley Arts Center, Avon, and was taught by Diane Brawarsky. Ms. Brawarsky is a recent M.F.A. graduate of the School for American Craftsmen, Rochester Institute of Technology and is a resident artist at the FVAC. She is a recipient of the National Endowment for the Arts, Craftsmen's Fellowship Grant, in Papermaking and Fiberwork. Except for a magnificent handcrafted press, her personal supplies and equipment were ordinary household tools and inexpensive equipment.
Both workshops were exciting. The participants were involved in the fiber preparation, cooking, beating, forming, couching, pressing, separating and drying processes. Mr. Barrett's workshop was based on the traditional Japanese papermaking method called Nagashizuki. It is quite a different process from the Tamezuki (Occidental) method, hence we were limited to making very thin sheets of Japanese paper from the kozo (mulberry) tree. Because the Western method suited my purpose I chose to do my experimenting with that form at the Brawarsky program.
IV. THE EXPERIMENTS

This workshop was geared to making paper as an end in itself and there was no limit as to the kinds of cellulose that could be utilized for pulp. In fact, experimentation was stressed, both in trying a variety of pulps and in manipulating the waterleaf. While still wet, different effects can be achieved by tearing, bending, twisting, shaping over three-dimensional forms, laminating flat or raised objects between two sheets, and rolling the paper into and over itself.

Because their aim was to use paper as a medium of expression, all the other artist-participants (and the instructor) worked with Indian and Manila hemp, straw, cattail leaves, cotton linter, and bits of dried flowers. My interest, however, was to try to develop the kind of heavyweight 100 percent rag paper which I normally purchase for watercolor painting. Initially I used the cotton linter which was supplied, to make pulp. Cotton linter (according to Webster) is the fuzz of short fibers that adheres to cottonseed after the ginning process. Cotton linters are available from supply houses both in dry and wet forms. The dry sheets of cotton linters must be soaked overnight in water and then beaten.
The beating equipment used was a standard kitchen blender. Excess water was squeezed out of the cotton linter, and an amount of linter approximating a Ping-Pong ball in size was placed in the blender with three cups of warm water. The blender was turned on for about a minute at a time, progressively using the full range of speeds from number 1 whip to number 7 liquefy. Within two or three minutes the linter had become thoroughly suspended. In breaking down into pulp the fibers hydrate; that is, the cellulose is altered, increasing the fibers' capabilities to absorb water. Three batches were processed and consistency was tested by observing that the water became milky and had no visible threads or lumps. Heller states that the proper preparation of stock is essential in making paper, and "the object in making good pulp is to have a variation in fiber length and adequate strength."

A small rectangular plastic pan (12 × 4 × 6 inches) was filled about two-thirds with water and the pulp was mixed in, a small amount at a time, to make what is called slurry. I dipped my mould and deckle in the slurry using the proper procedure for forming handmade paper—it was an exciting moment. Bringing the mould and deckle out of the vat and draining it, I was sure the paper was going to be even thicker than originally planned. After removing the deckle, the fibers

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22 Heller, p. 38.
on the mould appeared amazingly high. As soon as the paper was couched, though, I realized that a soaking wet sheet of waterleaf is 90 percent water and 10 percent fiber! In order to have three samples of every experiment, I repeated the original version (fig. 1) twice more, then returned to the blender with an increased supply of linter. The second batch of slurry appeared to be the answer but it too produced couched waterleaf (fig. 2) that was far from the desired thickness.

My mould and deckle was small (3½ X 4 inches), with a 20 mesh copper screen. Filling the deckle to the rim (one-half inch high) did not result in the thick paper expected so another approach was attempted. Since waterleaf can be laminated while wet, the third set of three matching papers was created by that method. After couching the first sheet, I couched four more directly on top of it, thus laminating five sheets together (fig. 3). At last, a thick 100 percent rag paper!

Because of practical considerations it would not be reasonable to follow this method in creating the type of paper I had planned. So another solution was sought. This was an individual problem because neither the instructor nor the other artists had the interest or intention of working with 100 percent rag paper.

Thicker and longer fibers might be the answer, so part of a very old and worn cotton pillow case was
torn into half inch strips about a foot long. Holding a half dozen strips in one hand, they were scissors cut into quarter inch pieces. The small size was used so that the standard kitchen beater could break down the pieces without overworking the beater motor. The pieces were placed in a quart size glass jar and, after pouring hot water over them, they were left to soak overnight. The next day excess water was squeezed out and small amounts were blended using short bursts of speed along with the full range of processing allowed by the blender. Again consistency was tested and enough small batches produced to fill my vat. To maintain a very thick slurry, I resorted to an unorthodox maneuver. Since pulp has a tendency to sink, I waited till the pulp sank in the blender pitcher, then poured off the water that remained at the top into a separate container. When the pulp was placed in the vat it sank again, so I skimmed off the excess water there too. This excess water did have a thin pulp suspended in it so it was placed back in the pitcher rather than adding fresh water each time a new batch of pulp was made. This procedure did take considerably more time but it maintained as thick a pulp as possible without using many gallons of water (and a great deal more pulp), which would have necessitated a huge vat.

The slurry now appeared ideal. However, in raising the mould and deckle out of the vat, the pulp
was so thick the fibers clung together tenaciously and
there was no clear separation of pulp at the deckle
dge. The deckle could not be lifted off the mould be-
cause clumps of fiber hung down over the deckle edge.
No amount of shaking could loosen them. I tried break-
ing off the clumps with my fingers but parts of the
main body of paper broke off too. A solution was to
cut off the excess with scissors. Although that solved
the immediate problem, it was not really satisfactory
because all the steps in forming and couching paper
should be smooth, continuous, rhythmic ones.

The other participants and the instructor were
using as moulds (for their thin pulps) small pieces of
wire mesh screening without frames or deckles. An un-
orthodox tool but it worked. I borrowed a piece of
screening and tried it with my rag pulp. Since no
deckle was used, it was much more workable for me to
cut off the excess pulp at the unframed screening edge
than to try to cut at the top of the deckle frame of my
mould. Although the deckle edges posed a serious prob-
lem, the 100 percent cotton rag pulp from the old pil-
low case did produce a white heavyweight paper (fig. 4).

It was time to experiment further with other
kinds of fibers. I had some skeins of lovely old cot-
ton and linen threads. I cut thousands of half inch
pieces from a double skein of cotton (about forty
threads). The pieces were put into a pint glass jar,
hot water was poured over them and they soaked over-
night. The same method was used for the linen threads. Batches of each were processed (separately) in the blender. Because the pulp was as thick as the cotton rag and cutting had to be done at the deckle edge again, I used only the single unframed screen as a mould. After forming the paper I trimmed, couched, pressed, and air-dried the paper. Paper made from the pulp of the cotton threads (fig. 5) is the same lovely cream color of the original skeins. The off-white linen paper (fig. 6) is also the same shade as the linen threads from which it was made.

The next experiment was a different kind of challenge; recycling paper! Taking some discarded watercolor paintings, I tore parts of the rag paper (120 and 200 lb) into half inch bits. The pieces were soaked overnight in hot water. The different colored pigments on the discarded paintings sloughed off and stained the water in the jar of soaking pieces a dark green. I used this green water for the blender pulp processing. It was a surprise, therefore, to discover that the resulting paper (fig. 7) was a warm, light gray.

It was difficult for me not to change direction and just work with paper as a creative means of expression. Producing an abstract collage by laminating (using a very thin top sheet of paper) parts of previously painted watercolors or shaping the heavyweight stock
into three dimensional forms were two completely different approaches which were not done at the workshop by any of the artists. The more I worked with pulp and paper the more ideas occurred to me.

Other than the cotton linter, the instructor had not worked with 100 percent rag pulp so I shared my supply of cotton and linen skeins and unbeaten pulp (from the discarded watercolor paintings) with her. She planned to use them in her own production of creative paper as fine art.
V. CONCLUSION

Making paper is a technical, complicated process. In his book *Papermaking*, Dard Hunter (considered the master of master papermakers) stated: "It is not possible to make really even sheets without at least five or six years of constant application at the vat...the work at the vat requires patience, endurance, strength, and an almost superhuman sense of weight."\(^{23}\) My experiments were limited to small size samples, but they were large enough to prove to me it would not be practical to make the 22 X 30 inch paper I am accustomed to using for painting.

With the seven different tests, my experiment in making handmade watercolor paper was complete. Many weeks of full-time research, thoughtful reflection, and writing led me to conclude that: the experiments were meaningful and successful in that I learned how paper is made and I did produce heavyweight 100 percent rag paper suitable for watercolor; making handmade paper is a totally demanding and time-consuming professional craft/art. I need good professional paper for my painting, and from experience can now fully appreciate the

\(^{23}\) Hunter, p. 444.
time, effort, and expertise that goes into creating the expensive, 100 percent rag, commercially produced hand-made paper that I purchase.
THE MOLD AND DECKLE

The mold is a most important piece of equipment for the papermaker's use. It is the tool that actually makes the sheets of paper. Usually rectangular in shape, the mold consists of a screen with a wooden edge resembling a small version of a modern window screen. On top of this is usually placed a second, separate wooden frame called the deckle. The deckle is used when the pulp is to be confined within the surface area of the screen. It aids in determining the size of the individual sheet.

A mold and deckle. The deckle is fitted over the mold to prevent excess pulp from spilling over the sides of the mold as it is drawn from the vat.

A handmade mold and fitted deckle. The wood is mahogany.

Used with permission of Van Nostrand Reinhold and Vance Studley.
DER HOLLANDER
Being the beater of the Oak Park Press & Paper Mill at Wichita, Kansas, U.S.A.

1. Tub; 18 x 36 x 14 in.
2. Roll; 13 in. dia. x 8 in.
3. Bed-plate
4. Back-fall
5. Mid-feather
6. Motor; 5 hp.
7. Clearance adjustment
8. Drain
9. Roll hood (removable)

The tub is of wood, sealed with fiberglass, while the roll and bed-plate are of hard aluminum alloy. A steel chassis supports the motor and roll assembly, which is adjustable for roll-to-bedplate clearance. Roll turns at 290 r.p.m. Pulp flow rate: 6 circuits per minute. Tub capacity: 10 gallons.

This diminutive broadside has been conceived and executed by Jim Yarnell as a keepsake to commemorate the 1st Papermakers' Conference, at Appleton, Wisconsin, November 21-23, 1975.
First position of the mould in the sheet-forming process. The deckle frame is held tightly to the mould by hand pressure.

The mould is plunged into the vat, but is not completely submerged. When you do this, bring the bottom edge of the mould back to your body and hold it level.

The mould with a new charge of wet pulp. A rocking action evens the thickness of the pulp, and then a shaking from right to left and back to front causes the fibers to close.

A newborn, soaking-wet sheet on the assboard. At this stage, so say the experts, the product is less than 10% fiber and more than 90% water.

A vatman from Central Madras
Had a simply magnificent ass
Not rounded and pink
As you’d naturally think
But was teakwood, embellished with brass.

Fig. 1. Cotton linter paper
Fig. 2. Cotton linter paper
Fig. 3. Cotton linter laminated paper
Five laminated layers
Fig. 4. 100 percent cotton rag heavy-weight paper from pieces of an old pillowcase
Fig. 5. Cotton thread (old skeins) heavy-weight paper
Fig. 6. Linen thread (old skeins) heavy-weight paper
Fig. 7. Recycled watercolor paper
Fig. 8. Combined Manila and Indian hemp paper with dried flower pieces
Fig. 9. Japanese kozo (mulberry tree) paper
SELECTED BIBLIOGRAPHY

Books


Workshops


PAINTING THESIS

Preface

The following pages include: the Thesis proposal, my personal statement, some excerpts from my Journal written during the painting process, and photographs of six Thesis paintings.

Since I have a tendency to paint (and draw) in one of two extremes (either totally non-objective or truly representational), it was a tremendous challenge to me to try incorporating elements of both styles. In the Harbor Series I began the compositions of the close views first. I feel now that they include perhaps too much visual information. With time my approach hopefully will express my personal vision and aspirations more concisely.

I want to express my deep appreciation to Fred Meyer for his patience, understanding, and cooperation and most of all for helping me expand my knowledge and aesthetic perception. I shall always be grateful to have had a master teacher.
Thesis Proposal for the Master of Fine Arts Degree

College of Fine and Applied Arts
Rochester Institute of Technology

Title: Visual Perception and Form
Submitted by: Anne Harris Zyla Date: 5/15/76

Thesis Committee:

Chief Advisor: Professor Fred Meyer
Chairman of Graduate Programs
School of Art and Design

Associate Advisors:
Professor Houghton Wetherald
Science and Humanities Staff
Professor Johannes Zandvoort
Science and Humanities Staff

Departmental Approval: 6/1/76
I would like to develop a series of watercolor paintings ranging from abstract to representational using the same subject matter. In the first painting I intend to show a visually perceptible close-up view of part of an object in a composition and from this totally abstract design form expand each successive painting to include more visual information. The proposed written report will describe my experience with producing handmade watercolor paper.

Anne Harris Zyla
Shapes are so important...we often recognize objects by their general form long before we have close visual contact to confirm our recognition. Harmonious shapes are like music to our vision. Strong shapes sing loudly...they satisfy our mind's eye, delicate and lacy shapes are the lighthearted notes that lift our spirits.

I am a visually oriented person (one who sees the whole picture) unlike the haptic (who zooms in on a specific area because of intense emotional involvement). Shape has always been my main visual interest but there was a conflict between seeing so much that a few strong shapes became subordinated and incorporated into a panorama of shapes. The concept of "less is more" was overwhelmed by "more is less".

In developing a combined visual-haptic mode of perception, I have attempted to eliminate extraneous detail and think in terms of major shapes and their relationship to other established forms within the same context. Equally important was the involvement with color, texture, value, balance, and rhythm which were established through both visual and kinesthetic experiences.

May, 1979
In the Harbor Series: Sunday Morning I, Sunday Morning II, Fisherman's Boots I, and Fisherman's Boots II, I want each painting to stand on its own merits as an individual work and yet, when seen as a group, there should be a theme which carries through. I want to convey the effect of bright mid-morning sunlight (on salt, sun, and water-weathered marine objects) at a small New England fishing harbor on a Sunday morning. The typical objects (boats, docks, wharves, lobster pots, and fishing gear) appear isolated and motionless. To me the lack of human content lends a haunting loneliness to the atmosphere—a sensation that everything is abandoned.

Eliminating extraneous detail in the compositions forces me to think in terms of major shapes and their relationship to other established shapes. In giving visual expression I do not want to re-create the scene but rather to emphasize and delineate those shapes which have strong lines so that dynamic relationships are developed. I want the angles and ellipses in the boat compositions to achieve stable tensions and asymmetrical equilibrium. It is the hidden drama that I'm seeking.
The immediate problem for me is the amount of detail to exclude. In using transparent watercolor, the choice of object and detail inclusion is of paramount importance—rarely can the brush stroke and/or color be removed. At the risk of changing the values, the object or detail can occasionally be painted over, and may, indeed, result in a worthless painting. Therefore, I find mental visualizing a time-consuming but necessary process.

From a technical standpoint, the boot texture is the greatest challenge. I want to achieve a definitive tactile quality. The two-color mottled effect is finally attained by applying a light value wash of a warm gray-beige (ultramarine blue, sepia umber, burnt sienna, and raw sienna) over the entire boot area and allowing it to dry thoroughly. Then using the same color mixture but with a great deal of pigment so the value is dark, I apply a wash over the entire boot again. While the surface gloss is diminishing, the paper is absorbing some of the pigment. As soon as the surface is dull, but still wet, I sponge off (with Kleenex) those areas which define the form and those which require highlights. The result is a mottled effect which has obvious blue and brown tones. I feel this texture projects the water-worn rubber surface (a decided contrast to the wood grain) and strengthens
the boots as the focal point.

I take much artistic license with the use of light and dark for the sake of balance. And trying to match the values and colors of the paintings is exasperating--the slightest addition of too much pigment can throw off the entire wash. (The original paintings do match in color, but because the photographs included here were not taken nor developed at the same time they are not, unfortunately, color correct.)

I have exhausted all of my present capabilities--the paintings leave me with mixed emotions. It is "A Long and Winding Road." So much to learn--so much to know--so much to see!
"Still Life with Onion" is being done as a change of pace.

I went to the Farmer's Market to purchase fruits and vegetables for a still life—the lemon and onion are chosen for their warm colors and delicate textures. I want to make a simple statement: here are two of nature's foods and they are noble in themselves! Now the question is, can my brush and paint do justice to these gems? At least the concentration on them will refresh me.

I am concerned with proportion and directional arrangement of the major shapes and the negative spaces in and around the objects. In attempting to give contrast to the curved shapes, the table edge is deliberately placed at an angle—one force against as opposing force.

The variety of subtle textures and strong cast-shadow values are pleasant for me to work with. When completed, it appears that the painting can be hung in any direction.

"But still they lead me back to the long and winding road."
"Winter Lichens" is the result of observing frozen snow on rocks in a parking lot. This is to be an experiment in using pigment. Rather than building up form from layers of watercolor strokes and washes, I decide to try lifting out pigment for color and shape for the rock formations. Also I want to try using wet-pigment-on-wet-pigment to create the lichen shapes. Other than the general edge outline, no drawing delineates any of the areas, so using a very dark and thickly pigmented wash poses no problem.

I saturate the paper with clear water. While the surface is still glossy I brush the color mixture (cobalt blue, burnt sienna, yellow ochre, cadmium orange, and lemon yellow) on--first vertically, then horizontally. While the wash is still wet, I selectively place large drops of yellow ochre pigment in clusters. On top of some of the still wet yellow ochre I place drops of naples yellow and drops of cadmium orange. It appears to be the nature of these pigments to run and spread in an irregular, star-like pattern as long as the initial wash is still very wet. An interesting effect--similar to (and safer than) using salt--exciting and new to me. Since the wet-pigment-on-wet-pigment determines the lichen formations, the rock shapes have to be carefully lifted out in terms of form, texture, value, and balance.

"The long and winding road . . . will never disappear, I've seen that road before."
SUNDAY MORNING I
SUNDAY MORNING II
FISHERMAN'S BOOTS I
FISHERMAN'S BOOTS II
STILL LIFE WITH ONION
WINTER LICHENS

Anne Harris Zyla
Watercolor Paintings
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