

MA

THE WOODCUT AS A TECHNIQUE FOR CREATIVE EXPRESSION

by

James E. Sutton

An Essay

Dep
o the faculty of the
Department of Art

to accompany the Thesis in partial fulfillment
of the requirements for the degree of
MASTER OF ARTS
in the Graduate College, University of Arizona

1956

Approved

Mark Voris
Director of Thesis

6/22/56
Date



STATEMENT OF PROBLEM

The use of the woodcut as a fine arts medium demands consideration and exploitation of the particular characteristics of the medium. It is the purpose of this thesis, therefore, to investigate some of these characteristics, particularly as they apply to the side wood block.

METHOD OF TREATMENT

The project is to be divided into two parts, the experimental and the creative work. In the experimentation it is intended to investigate the characteristics of the side grain wood block in regard to cutting characteristics, methods of making notations on the block, and the impression qualities of various wood grains and surface finishes. The final creative effort is to be a multicolor print in which advantage will be taken of the experience gained in the investigation.

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at the University of Arizona and is deposited in the Library to be made available to borrowers under rules of the Library. Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the dean of the Graduate College when in their judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED:

James E. Sutton

TABLE OF CONTENTS

Chapter		Page
	STATEMENT OF PROBLEM.	ii
	METHOD OF TREATMENT	ii
I.	INTRODUCTION.	1
II.	EXPERIMENTATION	4
	Woods and Cutting	4
	Inks and Printing	7
III.	CREATIVE WORK	10
IV.	CONCLUSION.	13
	BIBLIOGRAPHY.	15
	PRINTS	

CHAPTER I

INTRODUCTION

There is currently a growth of activity in graphic arts in the United States. The woodcut and wood engraving are being received with increasing interest and popularity. Woodcut workshops and classes are appearing in art schools and colleges throughout the country. Artists are devoting more time to the production of block prints than ever before.¹

Compared to other graphic mediums the woodcut technique is very simple. Any portion of the block which is to remain white is cut away. All remaining raised parts will print. After the cutting is completed, the block is inked with a brayer or brush and printed by applying pressure in a press or by rubbing the back of the paper with a spoon or bone folder. All prints in this project have been printed by the latter method. The resulting print is dependent upon the amount and consistency of the ink, the structure of the paper, and the uniformity of the impression.

The terms woodcut and wood engraving are often confused. I shall consider any print from an end grain block, engraved with a burin or graver to be a wood engraving, and a print from the plank or side grain wood, cut with a knife or gouge to be a woodcut.

1. Museum of Modern Art Bulletin, Volume XVI, Number 4, 1949.

Looking back to the earliest evidence of the woodcut we find Japanese block prints as early as 764-770 A. D. during the reign of Empress Shyau-toku. While there is considerable speculation as to the first appearance of woodcuts in China, it is generally agreed that the invention of wood engraving and block printing is accredited to the Chinese, three or four hundred years before its introduction to Japan.² In Europe wood engraving had to wait until the manufacture of paper which appeared centuries later than in the East.³ Before this, however, wood blocks had been used in the printing of textile designs. The oldest of these are the Coptic blocks of the sixth century. Little is known of the invention of woodcutting in Europe, nor is there any evidence of any route for its introduction from the Orient. The earliest European example of the woodcut is assumed by Henri Bouchot to be about 1350.⁴

In addition to its use as a technique of artistic expression, the early woodcut was frequently a form of utilitarian art. Among its varied uses were to be found the printing of textiles, playing cards and devotional prints sold as souvenirs at the pilgrimage shrines.⁵ About the middle of the fifteenth century books were produced in which both text and illustrations were cut from blocks. As movable type made this

2. Edward F. Strange, Japanese Illustration, (London: George Bell and Sons, 1904), p. 1.

3. Douglas Percy Bliss, A History of Wood-Engraving, (London: J. M. Dent and Sons, Ltd., 1928), p. 10.

4. Ibid., p. 11.

5. "Wooden History at the Institute," Art News, February, 1949, p. 54.

practice obsolete the woodcut was continued in use for book illustration.

There is little change found today in the method of cutting and printing the woodblock. The first blocks were printed by hand force, later by rubbing the back of the paper with a hard pad, burnisher or flat piece of wood, and lastly by the printing press.⁶ The design is usually drawn directly on the surface of the block in pencil or India ink, or traced on the block from the original drawing, and the parts which are to remain white in the final print cut away. The traditional and still most popular tool used today is a knife with its cutting edge at an angle. A variety of gouges may be used as may answer the preference of the individual, but the knife is particularly desirable for cutting thin lines across the grain and is less apt to tear the wood.

Cherry wood has long been one of the most popular woods for its close grain and rather smooth cutting qualities. Apple, pear, plum, poplar, beech, sycamore, and birch have also been used extensively. Since most of these woods, however, are uncommon to this part of the country, exploration has been undertaken in various woods which can be found in local lumber supply companies. Papers and inks, by necessity, have been those most easily obtainable locally.

6. Arthur M. Hind, An Introduction to a History of Woodcut of the 15th Century, Vol. I, (London: Constable and Co., 1935), pp. 2-5.

CHAPTER II

EXPERIMENTATION

Woods and Cutting

It has been said, "a woodcut may be made on a cigar box with a pocket knife."⁷ While there is no reason for making it extraordinarily difficult, an old board from a packing box, a weather beaten piece of fence post or a rough planed plank offers interesting surface textures that can be utilized in a block print. When it is intended to use natural textures of this type it is advisable, even essential, to pull a proof from several surfaces in order to determine the one most suitable. The texture itself may suggest a theme which can be developed with a few simple shapes or lines. (Print 1). Perhaps it should be mentioned here that linoleum cutting is a valuable experience for anyone contemplating woodcutting for the first time because of its extreme ease in cutting and the similarity in the visual effect of the print. I had been working in linocuts for six months prior to my first experience with wood. It was this, I believe, and certain limitations pertaining to this medium that aroused my interest in the woodcut.

Because of its soft cutting surface and ready availability, I chose pine for my first experience in cutting. I soon learned that while pine is soft and cuts quite easily longitudinally, when cutting across the grain it chips and splinters. Furthermore, a fingernail or

7. J. J. Lankes, A Woodcut Manual, (New York: Crown Publishers, 1932), p. 3.

pencil point will scratch the surface so that great care must be taken in handling the block so as not to mar the printing surface. Tearing when cutting across the grain can be alleviated somewhat by limiting the depth of the knife cut to about one-sixteenth of an inch. It is necessary to gouge out large areas deeper so that they will not pick up ink from the brayer and to prevent the paper from sinking in and making an impression. Pine and other soft woods such as bass and redwood are suitable only for broad effects and tools must be kept razor sharp. In direct contradiction to this one or two contemporary American woodcut artists use white pine almost exclusively. Their work is for the most part quite bold and chipping accepted as part of this bold treatment. Because of the nature of the grain of pine and redwood when it is surfaced at the mill, it frequently presents an interesting textural pattern. Fir, too, has good textural possibilities but is unsuitable for cutting. Not only the grain, but flaws and knots can heighten this bold effect. The free use of these natural materials overall (Print 2), however, is not always effective and can become a crutch in filling space of an uninteresting background. To avoid a cheapening of this effect it must be correlated with the drawing. (Print 1).

Mahogany, while somewhat harder than pine, is quite grainy and splinters readily. It also is suitable primarily for broad effects. The open grain lends a pleasing textural variation, particularly in large areas.

For fine line work I have found cherry to be the most satisfactory. (Print 3). It is a close grained wood and has good tensile strength for cutting across grain. Birch, pear and walnut are also good, and although walnut seems to be little used, I found it pleasant

to cut, with fine work possible in spite of its open grain. Because it requires a more delicate touch for cutting across grain it does not measure up to cherry.

Most lumber distributors carry birch veneered plywood which resists warping and retains cutting characteristics that are almost identical to the solid wood. Large areas to be removed can be peeled away with a chisel and if only raised areas are inked with the brayer, there is little danger of picking up impressions from these areas.

Pear, considered by some to be second only to cherry, held no advantage over birch. If anything, it had a slightly greater tendency to chip than birch.

Experiments in a variety of methods of making notations on the block were tried in both hard and soft woods. Each method was tested on a block of pine and birch (Prints 4 and 5) and a proof kept for further reference. Peening, pounding coarse sandpaper into the surface with both the peen and face of the hammer, and scratching the surface with the teeth of a broken power hack saw blade were found to be satisfactory in both hard and soft wood. Using various inserted bits in an electric vibrotool revealed a variety of interesting textures, particularly in the birch. The tendency of the tool to sink deeply into the soft wood and resulting in pure white areas in the print make it impractical for pine. A countersink and assorted nails are useful for a variety of small circles and holes. A few of these textures were used in conjunction with the knife and gouge. The vibrotool was employed in texturing the back of the man in Print 6, in Print 7 a nail for the buttons of the accordion, in Print 3 a countersink on the breast of the

eagle, and a hack saw blade for the background of Print 8. Discretion, of course, is important in the use of textures of this type. They are primarily useful, I feel, in adding variety to large flat areas of color.

In the use of cutting tools the knife far excels any other for fine line work. Care must be taken to avoid undercutting which results in breaking or rounded edges during printing. In cutting, the knife should be inserted at a slight angle so that the line to be followed widens slightly at the base. A small veiner or V-gouge is suitable for "cleaning up" and cutting fine lines with the grain. I found it expedient to use the veiner to outline before using the gouge to rout large areas. Costly mistakes can be avoided if one remembers always to cut away from lines and other fine work. Four tools, the knife, veiner, a small and large gouge are ample for almost any cutting problem.

Several sketches on paper will eliminate many hours of wasted, tedious work. Careful planning of a design before cutting cannot be emphasized too strongly. At first, a detailed carefully rendered drawing may be advisable. As one becomes more familiar with the technique one or two quick sketches may suffice. After all corrections have been made and a suitable design found, it is then either traced or drawn directly on the block. I prefer drawing directly on the block except when making a multicolor print where a fairly close register is desired. One must bear in mind that the print will appear in reverse to the drawing on the block.

Inks and Printing

Should it become desirable to "pull a proof" before the cutting is completed yet retain the original drawing on the wood, a pencil

rubbing will give a fairly accurate reproduction of the work up to that point. However, it will not show the sharp contrast of black and white of the final print and will appear in reverse. A piece of paper is laid on the block and the paper rubbed with the point of a soft pencil. The relief portion of the block will appear slightly darker than that which is cut away.

Painters' oil colors, etching ink and block printing inks were used in various prints. One of the advantages of oil colors is the wide range of hues that can be readily mixed to the desired color. It is advisable to squeeze the paint on a piece of paper toweling to soak up the excess linseed oil as linseed oil bleeds on paper. The color should then be mixed thoroughly with a few drops of etchers' heavy plate oil to make it tacky and prevent the ink from soaking into the block. Too much plate oil will result in thin color and skidding of the brayer on the block. Etching ink must also be mixed with plate oil to obtain the desired tackiness for braying. A dense black with pleasing spreading characteristics can be obtained by mixing three parts intense etchers' black ink with two parts black blockprinting ink. In a print of more than one color it is wise to allow the first color to dry several hours before printing a second color. This is especially true with the slower drying tube oil colors.

After the block has been inked the paper is placed on the block and the back rubbed with a spoon or bone folder. As the paper is rubbed the impression shows through, which is a great aid in obtaining a uniform impression. The ink must be spread uniformly over the block in sufficient amount or no amount of rubbing will bring out an even impression.

Too much ink will result in clogging of fine lines.

Although the selection of paper was somewhat limited, two very good Japanese rice papers were found. A fairly soft, long fibred paper is the best. A hard finish paper makes it extremely difficult if not impossible to get an even impression and slips quite easily during rubbing. Japanese Zebu rice paper was found to be the most desirable. It permits a clear impression of the most minute notation on the wood as well as presenting a pleasing "feel" during the rubbing. One surface of the paper is softer than the other and has a tendency to fuzz during rubbing. It is best to print on this surface and rub the back, especially when printing more than one color. The soft surface can be determined by rubbing the paper gently between thumb and finger.

All materials which have been used are suitable for woodcutting and printing. It has been clearly illustrated that certain materials and techniques are more favorable than others. The choice must be made by the individual with careful consideration of his problem.

CHAPTER III

CREATIVE WORK

It was decided to divide the creative effort into two parts; the first, a large broadly defined five color woodcut, the second, a smaller delicately treated woodcut in two colors. Several preliminary pencil sketches were necessary to develop the composition. After the desired composition was obtained, a sketch was made in pastel to determine the color scheme. In the first print I wished to augment the mood through the choice of colors that would increase the solid, geometric quality of the foreground objects against an atmospheric quality in the background. In the second print, harmonizing colors were selected that would heighten the boldness of the dark lines and minimize harsh contrast between the white lines and the background.

The final drawing for the large print was reversed on tracing linen and transferred to the block which had been cut to sixteen by nineteen inches. Only the applicable areas for each color were drawn on the various blocks.

Because of the nature of the experimental work, two types of textures were utilized. A coarse grained piece of weathered fir veneered plywood was obtained for the background. Coarse sandpaper was pounded into the net area of the black block. Cherry wood was used for all blocks in both prints with the exception of the above mentioned fir plywood. Because only two blocks of the desired size were obtainable I used both sides of the wood for printing.

The plates in order of printing were green, gray, brown, yellow and black. The green plate was printed without any notations on the block resulting in a flat tone over the entire print. This also served as a guide in aligning subsequent blocks during printing. The warm gray printed from the textured fir block was also printed overall, eliminating an otherwise dull effect of too much flat color. This texture is noticeable through the somewhat transparent yellow block. The black plate was treated as another color rather than an outline to tie together the color blocks.

Painters' tube oil colors were used for all colors with the exception of black which was a mixture of block printing ink, etching ink and ivory black tube oil. It was necessary to clean the block after two impressions because of the nature of the wood grain which absorbed the oil causing the ink to dry and build up on the surface. Each color run was allowed to dry twenty-four hours before the next color was printed. Because of the size of the print it was necessary to use a light weight etching rice paper instead of the more desirable small Zebu paper. The characteristics of this paper resulted in a somewhat scumbled effect in large areas allowing the under color to show through. This textural quality adds to rather than detracts from the overall effect of the final print. No method of register was used other than aligning the block with the lower and right edge of the print. This proved adequate since a loose register was intended allowing the background color to show through as an outline.

In addition to the edition printed in the colors of the enclosed print I pulled two color proofs using different background colors. One

color proof was printed using red with a gray texture and the other gray with a red texture. The use of the red resulted in an overall warm print. While these two proofs are quite acceptable as prints I felt the cool green gave a more pleasing contrast with the warm brown and yellow.

The second two color woodcut was printed on Zebu paper. The yellow printing was allowed to dry overnight before printing the green. While several sketches were made, the final design was not traced on the block but drawn directly with pencil. The green key block was cut first. When the cutting was completed a proof was pulled using thick, tacky black ink. The proof was placed face down on the back of the key block while still wet and rubbed with a spoon. This left an impression of the key block on the wood. After allowing sufficient time for the ink to dry the second block was cut without any further preliminary drawing on the wood.

The value of the experience gained in the investigation is immeasurable. No additional problems were encountered in the final work which had not been solved in the experimentation.

CHAPTER IV

CONCLUSION

During the execution of this work I obtained a wealth of experience and information regarding the cutting and printing of woodcuts as well as several methods of making notations on the block. These additional methods of obtaining surface textures are pleasing primarily when used supplementary to the traditional method of cutting with the knife and are not techniques to be used freely for their effects alone. This project also may serve as a guide for the beginner contemplating his first woodcut.

The use of a press would greatly facilitate the printing of a normal edition, especially in large prints of more than one color. The printing time would be reduced to about one-fourth the time required for a hand rubbed edition as well as a more uniform group of prints. The use of a press might not be deemed practical for an edition of less than twenty because of the time required to set up and clean the press. In the absence of a press a simple registering jig can be made by nailing two strips of wood at right angles onto a piece of plywood. At least three small wood or metal pins are inserted into these strips. If a one inch border is desired from the printed surface, the pins would be placed one inch from the inner edge of the wood strips. The block is placed against the wood strips and the pins serve as guides for the edge of the paper.

While the woodcut is my personal preference over other graphic media, its limitations must be realized. Etching is far more versatile in its variety of effects. Frequently while I have been working on this project questions have arisen concerning the number of prints that may be pulled from a single block. Although time has not permitted an extensive investigation of this, an edition of two hundred is not uncommon on hard woods. I know of one example of an edition of 5,000 that was pulled from a pine block using a press. In spite of the heavy pressure exerted by a press, I believe a larger edition could be pulled from a press because of the tendency of the cut edges to become rounded from continued hand rubbing.

While working on this project I have had one dominant feeling, that is the limitation of time. Each woodcut suggests unlimited possibilities for further development and experimentation. Additional research in inks and papers would be highly desirable. One of the greatest advantages of working with woodcuts is the limited number of required tools and equipment which permits further exploration in the home unrestricted by costly and space filling equipment.

BIBLIOGRAPHY

- Arms, John Taylor. Handbook of Printmaking and Print Makers. New York: MacMillan Co., 1934.
- Art News. February, 1949.
- Bliss, Douglas Percy. A History of Wood Engraving. London: J. M. Dent and Sons, 1928.
- Hind, Arthur M. An Introduction to a History of Woodcut of the 15th Century. London: Constable and Co., 1935.
- Jackson, John. A Treatise on Wood Engraving. New York: Henry G. Bohn, 1861.
- Lankes, J. J. A Woodcut Manual. New York: Crown Publishers, 1932.
- Leighton, Clare. Wood Engraving of the 1930's. New York: Studio Publishers Inc., 1936.
- Mueller, Hans Alexander. Woodcuts and Wood Engravings: How I Make Them. New York: Pynson Printers, 1939.
- Museum of Modern Art Bulletin. Volume XVI, Number 4, 1949.
- Strange, Edward F. Japanese Illustration. London: George Bell and Sons, 1904.

PRINT 1

WOOD: BLACK - BIRCH

GREEN - PINE

ORDER OF COLOR: GREEN, BLACK



Sutton '56

PRINT 2

WOOD: BLACK - PINE

RED - REDWOOD

ORDER OF COLOR: RED, BLACK



7/

Section 56

PRINT 3

WOOD: CHERRY



Sutton '56

PRINT 4

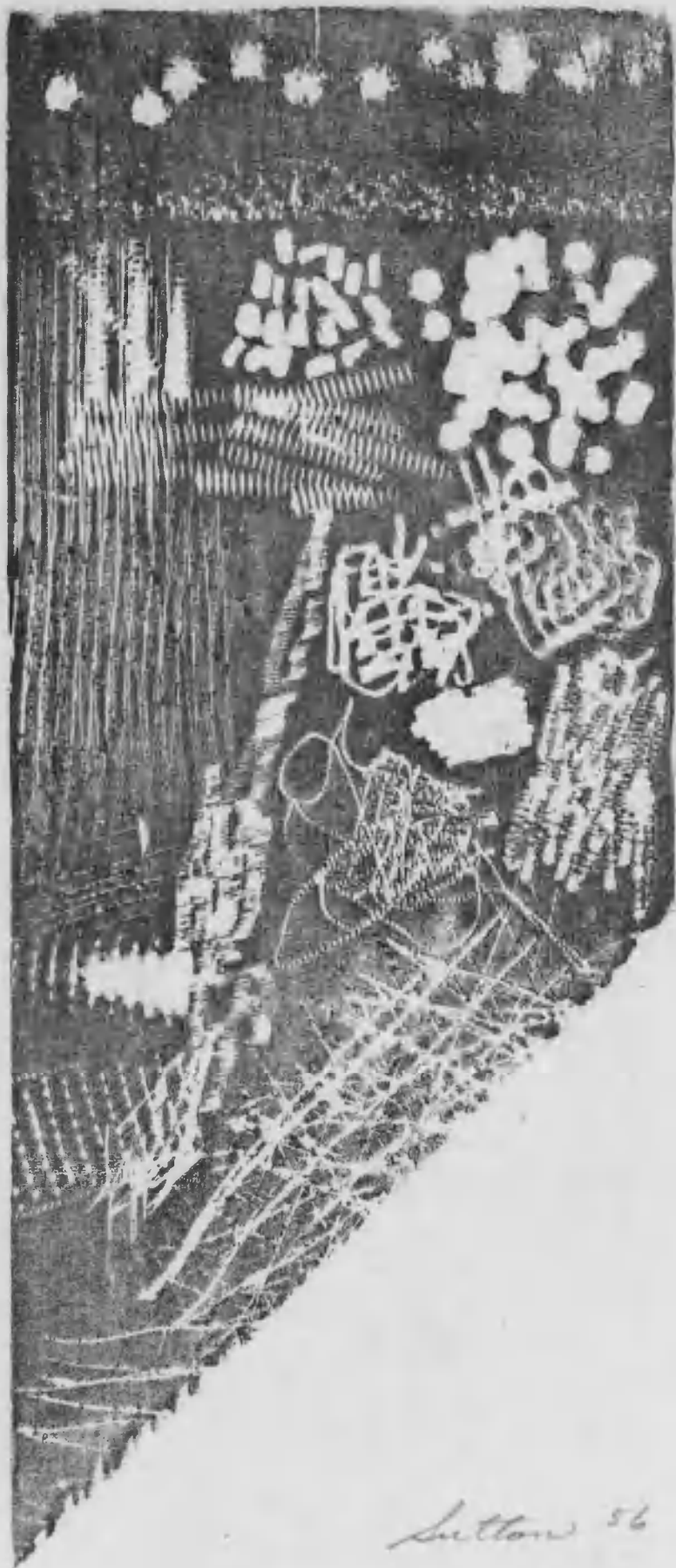
WOOD: BIRCH



Sutton '56

PRINT 5

WOOD: PINE



Sutton 56

PRINT 6

WOOD: BIRCH



Sutton 56

PRINT 7

WOOD: BLACK - WALNUT

GREEN - BIRCH



Sutton 6

PRINT 8

WOOD: WALNUT



Shitton 56

PRINT 9

WOOD: BIRCH



61

Sutton

PRINT 10

WOOD: PEAR



Sutton 56

PRINT 11

WOOD: MAHOGANY

ORDER OF COLOR: BLUE, BLACK



PRINT 12

WOOD: BIRCH PLYWOOD

ORDER OF COLOR: BROWN, GREEN



Settlem' 56

PRINT 13

WOOD: CHERRY

ORDER OF COLOR: GREEN, GRAY, BROWN, YELLOW, BLACK

(Enclosed in envelope following)



PRINT 14

WOOD: CHERRY

ORDER OF COLOR: YELLOW, GREEN

(Enclosed in envelope following)

