Experiments in printmaking

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EXPERIMENTS IN PRINTMAKING

by

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INTRODUCTION

The printmaker faces certain limitations and requirements that are different from the painter and sculptor. This is due to a greater dependence upon line, value and complex technical processes. The first requirement in printmaking is a thorough and confident approach in expressing images or symbols to be used. The graphic artist develops these symbols through repeated experiments and trials. He attempts to achieve a style, a character that adequately fulfills his needs. It doesn't matter if this style or character is realistic or abstract. It is more important for the printmaker to arrive at an individual statement satisfying as closely as possible his objectives.

This paper, then, records some deliberations and experiments in the area of printmaking. The prints presented are the results of exploration of various graphic techniques.
PRINTMAKING PROCESSES

Printmaking is the process of transferring an image from the surface of a plate to another surface. There are five clearly defined printmaking techniques: relief, intaglio, stencil, planographic, and the rollup. This paper is concerned with two of the most common techniques, relief and intaglio.

I. RELIEF PRINTS - The relief print is one of the oldest printmaking methods known. It refers to any surface that is carved, hacked, or eaten away in which the raised or relief surface is used to create the impression. The surface to be printed is inked and covered with paper and placed under pressure leaving the image on the paper.

A. WOODCUT - The woodcut was introduced in western Europe around the beginning of the fifteenth century. It was one of man's first attempts to reproduce pictorial images.¹

The woodcut is the most common relief print. It is made on a plank of wood with the grain running in one direction. The grain affects the detail of the design but offers an immediate and expressive means of printing.

B. RELIEF METAL ENGRAVING - Relief metal engravings were
being done in the late fifteenth century. The
impressions on the plate's surface were made by
striking punches into the metal or displacing the
metal by an engraving tool.¹

A relief metal engraving is similar to a woodcut
except metal is used for the plate instead of wood.
Like the woodcut, the design is carved or pounded out
and the relief surface is inked and printed. In com­
parison with a woodcut this process is more costly
and more time consuming.

C. WOOD ENGRAVING - Ivins states that wood engraving was
developed about the same time as the woodcut and that
both processes preceded etching.²

A wood engraving is produced by displacing the
surface of the wood and inking the raised areas. How­
ever, a wood engraving is made on a board which is at
right angles to the grain in contrast to a woodcut
which runs with the grain. Thus the wood engraving
can possess extremely fine detail and avoid the grain
design of the woodcut. And too, wood engraving is
more durable and less expensive than relief metal
engraving.

¹Ibid., p. 46.
²Ibid., p. 24.
II. INTAGLIO PRINTS - The intaglio process is the opposite of the relief process. Instead of the paper picking up the ink from the raised areas of the block, as in relief printing, the ink is picked up from the recessed areas. Thus the entire surface of the plate and recessed areas are covered with ink. The surface is then methodically wiped clean. It is important that the printer doesn’t extract the ink in the recessed areas. The plate is then covered with paper and placed under great pressure, forcing the paper down into the recessed areas. This process transfers ink to the paper leaving an impression.

Three of the most common intaglio processes are listed below. The main difference in these processes is in the treatment of the surface to be printed and not in the printing method.

A. ENGRAVING - Engraving was developed in the first part of the fifteenth century out of a desire to express pictorial and decorative ideas suggested by the practice of armormithing and goldsmithing.⁴

Engraving is a process in which the metal is displaced by a sharp tool resulting in a crisp, sharp line. It is a slow process but offers the opportunity for great detail.

B. ETCHING - At the beginning of the sixteenth century,

⁴William Ivins, Jr., Notes on Prints, (New York, 1930), p. 27.
etching began as a quicker and easier way of doing the job of engraving.\(^5\)

Etching is a process in which a corrosive substance such as acid is required to remove lines and areas from the plate. The plate is usually metal. It is covered with a protective substance, commonly a wax mixture, which is resistant to acid. The drawing is made on this substance exposing the metal and then immersed (bitten) in an acid bath. After the desired depth is reached, the protective substance is removed and the plate is inked, wiped, and printed as an engraving.

C. COLLAGRAPHS - The collagraph began as a twentieth century experiment that has gained favor in the last decade. It combines the spontaneity of painting and the discipline of graphics. The collagraph is a logical extension of the intaglio process in attempting to simplify techniques in search of a printed image. Like the etching, the collagraph grew out of a desire of the printmaker to gain speed and a greater variety of textured surfaces.

The collagraph is an intaglio process employing a constructed printing surface called a collage. Inexpensive composition board can be used for the

\(^5\)Ibid., p. 5.
plate and various textured materials such as paper, sand, and metal can be glued to the plate. The plate is then inked and wiped in the same manner as an engraving or etching.
Printmaking constantly changes its objectives and techniques. In

*Printmaking*, Gabor Peterdi speaks of this change as follows:

In the last decades the function of the print has changed
a great deal. In the past, prints were collected mainly
by bibliophiles to be kept in drawers and in handsomely
bound portfolios to be handled and admired occasionally.
With the exception of the Japanese print, a truly popular
art, and the early Christian woodcuts teaching the gospel
to the illiterate, the print was universally considered
to be a precious thing. When in the nineteenth century
Parisian artists discovered the Japanese print, a revolu­
tion began that is still going on today. The lithographic
posters of Toulouse-Lautrec and Bonnard opened up the
tightly closed drawers and liberated the print.  

Generally speaking, it can be said that the graphic arts, through
history, have been more concerned with pictorial reproduction of know­
ledge and events than aesthetic expression. Because of this, print­
making has had a difficult struggle in establishing itself as a major
source for personal expression. The reason for this secondary position
is explained by William Ivins, "It is probable because in general
printmakers are primarily technicians and only secondarily artists.
It helps to explain why such an overwhelming proportion of the great
prints have been made by painters rather than by professional etchers
or lithographers."  

In the past, prints were usually conceived and executed in terms
of black and white. They were small, delicate, and primarily involved

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p. 170.

7Ivins, *op. cit.*, p. 169.
with technical aptness within a limited range of materials. They were more concerned with the subject itself than the treatment of the subject. The question of which printmaking medium to use was greatly influenced by the fluctuating standard of living and the cost and availability of materials.

Today, a new tradition is being established. The photograph has taken the place of the graphic pictorial reproduction and allowed the printmaker the opportunity to express himself in more aesthetic terms. With the introduction of new synthetic and inexpensive materials such as plastics, fiber glass, and acetate a new graphic vocabulary is being established.

The importance of printmaking is growing rapidly. There are now many public and private galleries encouraging graphic exploration. Also, the desire by the contemporary public for so-called "modern art" has certainly aided in popularizing the graphic arts and establishing a new tradition of acceptability.
LIMITATIONS

In printmaking, as in every art form, there exist certain restrictions and limitations. For example, in the Graphic Arts, the width of the press, the size of the paper, and the availability of various instruments must be taken into consideration before the print is finally produced. In the past it has been largely confined to the presentation of small, rectangular, and matted prints. The small size is primarily attributed to the nature of the various mediums themselves, in terms of expense and the physical labor required in the print's execution. The traditional square or rectangular shape of prints is the product of the shape of the press bed. The matted print has developed out of a desire to protect the print as well as set it off with a frame.

The contemporary printmaker, like the potter and painter, is attempting to seek out new means to express his ideas and emotions. Recently, in the area of pottery, the exploration for new forms of expression has resulted in a departure from traditional functional wares, and as a result, pottery is now competing with sculpture in terms of large scale and decorated surfaces. This explorative approach is also existant in painting where three-dimensional frames have been constructed and stretched with canvas offering the painter the opportunity to express himself in sculptural form.

Today the ever present cry of limitations by printmakers trapped in tradition is resulting in a powerful reaction by many younger artists. This reaction is one of exploration of new materials and
noncommitment to strict limitations. Peterdi says,

In the past twenty-five years adventurous artists with a healthy disregard for taboos of the graphic arts have tried just about everything that can be used or abused for printing. We have used every texture that can be pressed in a soft ground. We have printed every color of the rainbow. We have used every material, new and old, that either nature or science could provide. We have pushed the size limitations of the print to the breaking point where it starts to compete with mural decoration.

The print "Color Me Black," (fig. 2), is an attempt to express a multi-colored image on a scale much larger than those suggested by traditional practices. Other artists have also explored the possibilities of working on a large scale. The September issue of Time magazine, 1964, states, "In Hawaii recently, an art student produced an edition of 16-feet-long prints of incised masonite . . . Graphics no longer are limited by the size of presses."9 This is the result of the graphic artist's desire to minimize the importance of limitations and expand his visual expression in terms of new materials. These artists believe that the limitations of printmaking need not be totally restricting.

The small, rectangular, and matted print is more the product of a complete acceptance of traditional limitations than the limitations imposed by the medium itself.

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8Peterdi, op. cit., p. xxii.

9"Of Rabbit Glue and Beauty," Time (Sept. 4, 1964), p. 82.
UNIQUENESS

More than most other art activities, printmaking requires a great deal of patience in carrying out a number of necessary technical procedures. In this respect it is similar to pottery and unlike painting where anyone could participate without previous technical knowledge. And too, since mechanical equipment and tools are required, the graphic arts have constantly attracted draftsmen with patient and mechanical aptitudes.

Printmaking requires more patience than drawing or painting because the printer uses an indirect method. The draftsman or painter does not have to transfer his statement from a plate onto paper.

Another unique quality of printmaking is the high degree of control the artist can obtain in respect to these mechanical procedures. With a thorough understanding of his equipment, it is possible for the printmaker to establish a highly spontaneous and confident approach. However, it should be noted that it is this understanding which is the pitfall of many graphic artists as they can very easily become too involved in techniques within a very limited range of expression.

The inherent textural and linear characteristics of the printmaking mediums also enhance their unique qualities. For example, the rich, fuzzy lines of the dry point and the smooth, white areas on the

1DRY POINT: The process of drawing directly on a metal plate with an instrument of hard steel. The metal is displaced forming a burr along the edge of the displacement creating a fuzzy line.
plate's surface produced by burnishing\textsuperscript{11} are impossible to achieve in other areas of artistic expression.

However, the true uniqueness of printmaking lies in the act of "doing." Whether it be a line engraving or a collagraph, an etching or a woodcut, a sensitivity for the material can be established by the artist which is difficult to explain but easy to experience in practice. Although a prime characteristic of printmaking is the fact that a number of prints can be pulled which are exactly the same, the print, if pulled by the artist, can remain a new experience every time. Wassily Kandinsky explains the intaglio process as follows,

\textit{The pressure of the press is powerful. The plate eats its way into the paper. The paper penetrates the smallest depressions and tears out the color. It is an impassioned process which leads to the complete fusion of the colour with the paper.}\textsuperscript{12}

\textsuperscript{11}BURNISHING: The process of rubbing out shallow lines and smoothing surface areas on the plate. A curved steel instrument which is rounded and highly polished, called a burnisher, is used.

ILLUSTRATIONS OF PRINTS
1. A FRIEND (Etching) 8¼" x 9"
2. COLOR ME BLACK (Collagraph) 46" x 62"
3. BULL’S-EYE NO. 1 (Woodcut) 8" x 8"
4. BULL'S-EYE NO. 2 (Woodcut) 8" x 8"
5. BULL'S-EYE NO. 3 (Woodcut) 8" x 16"
6. BULL'S-EYE NO. 4 (Woodcut) 8" x 16"
7. BULL'S EYE NO. 5 (Woodcut) 12" High
8. RECLINING NUDE (Collagraph) 12 1/2" x 14"
9. SCREENS (Collagraph) 47" x 75"
CONCLUSION

These prints were produced solely out of a desire to present images and symbols in visual form within the area of printmaking. There has been a concern for the development of a faster means of printing and experimentation with various materials. On the other hand there has been little concern, in some cases, with accuracy of reproduction.

The collagraph is perhaps the fastest means of printing; and it offers this broad, new area of experimentation with materials. With the introduction of sawdust, plastic, tobacco, and many other textured materials to the collagraph plate, an opportunity of seeking out new means of expression is offered. This experimental approach proves to be exciting and stimulating in comparison to traditional procedures.

Most importantly, printmaking can be an expressive and spontaneous means of expression.
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"Of Rabbit Glue and Beauty," *Time*, (September 4, 1964), 82.