

A STUDY OF RECENT COMMERCIAL GRAPHIC ARTS MATERIALS AND
PROCEDURES FOR APPLICATION IN COLLEGE AND UNIVERSITY
ADVERTISING ART PROGRAMS

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CHAPTER I

INTRODUCTION

The Problem

An artist in the field of advertising art is primarily involved with creating artwork to be used as advertisements. These are designed to communicate between the producers of products and the consumers. Ever since man has had a written language, the principal means used for this communication has been the graphic arts. Today, despite the great popularity of television and motion picture advertising, the graphic arts, which refer to all forms of commercial printing and publishing, are still the most widely used means of communication in advertising.¹

In college and university advertising art programs the basic elements of design, layout, paste-up, lettering, type selection, illustration, and the use of materials are generally taught in their relation to the preparation of advertisements.² The advertisements to be printed, no matter how good they appear in the original idea or layout, will communicate to the public only after passing through some form of graphic reproduction. It is, therefore, important that instruction in commercial graphic arts materials and procedures be a part of college and

¹International Cooperation Administration, Technical Aids Branch, Visual Communication (Washington, D. C., 1965), p. 20.

²Donald Holden, Art Career Guide (New York, 1961), p. 108.

university advertising art programs. Only through a knowledge of the methods of reproduction will the final printed advertisement communicate the artist's original idea in the best possible manner. "Today's graphic designer must have a comprehensive knowledge of production techniques, typography, photography, reproduction processes, graphic formulation and symbolism."³

Based on the fact that commercial graphic arts are the most widely used means of communication and are considered a necessary part of college and university advertising art programs, it is the problem of this thesis to study recent commercial graphic arts materials and procedures, and to suggest some creative uses of them for college and university advertising art programs.

Definition of Terms

Graphic arts is a broad term which includes the commercial printing and publishing fields and the related industries of typography, photography, paper manufacturing, and printing inks.⁴ In this study it refers to commercial graphic arts materials and procedures.

College and university advertising art programs refer to the groups of courses in college and university art departments which offer instruction in the various areas of advertising art, also called commercial art, advertising design, and graphic design.

³Kansas City Art Institute and School of Design, College Bulletin 1961-1962, Kansas City, Missouri, 1961

⁴Darvey E. Carlsen, Graphic Arts (New York, 1961), p. 108.

⁵Holden, Art Career Guide, p. 8.

The Recent Growth of Graphic Arts

The advances in the graphic arts have been tremendous during the past fifty years. Perhaps the best speculation on the future growth is given by Fred S. Van Voorhis, editor of the Direct Advertising magazine: "What is current today can be passé tomorrow. This applies to both technological change and aesthetic innovation. The latter depends in large part on the former."⁶

Statements from writers on the graphic arts and from persons in its various fields support Van Voorhis' idea.

Like all modern industries printing has shown phenomenal growth and development in the past several decades. In fact, it is changing so fast that in the schools it is practically impossible to keep abreast with the new processes and machines found in the printing industry. A textbook for printing written a few years ago is now out-dated and one written today will be in need of revision ten years hence. Even the term "Printing" in the traditional sense is no longer adequate and it is rapidly being replaced with the more inclusive name of the Graphic Arts.⁷

In a book just released by the Printing Industry of America, Incorporated, it is shown that the graphic arts field was, until twenty-five or thirty years ago, still primarily involved in reproducing reading matter and illustrations by basically the same old methods of letterpress, etching and

⁶Fred S. Van Voorhis, editor, "Typographics and Change," Direct Advertising, LI (4th Quarter, 1965), 3.

⁷Clifford W. Hague, Printing and Allied Graphic Arts (Milwaukee, Wisc., 1957), p. v.

lithography, but that the effects of photography and photo-mechanics have greatly advanced the industry.⁸

Those in the field of advertising art "must understand typography",⁹ which furnishes the type or copy for the advertisements. In this area there has been rapid growth also, as the following quotations point out:

The traditions of the printing industry are literally being shattered by technology. Within the industry probably no area has felt the impact of optical and electronic wizardry more than the type community.¹⁰

We are indeed entering a new era in printed communication, an era of typography wherein the present is almost obsolete. We shall most certainly witness the growth and development of new typography.¹¹

Typography has been especially affected by the advances made in electronics, as is brought out in this paragraph:

Just eighteen years ago computers and automation were known to only a small number of specialists. Today electronic communication has advanced to affect all ways of life more than any other twentieth century technology. It can only be imagined what will happen by the close of this century and the effects it will have on graphic arts.¹²

⁸Victor Strauss, The Printing Industry, (New York, 1963), p. 8.

⁹Elisabeth McCausland, Careers in the Arts (New York, 1950), p. 112.

¹⁰Van Voorhis, "Typographics and Change," Direct Advertising.

¹¹Aaron Burns, "A New Typography," Direct Advertising LI, (4th Quarter, 1956), 1923.

¹²Joyce Morrow, "The American Institute of Graphic Arts Today," The Journal of the A.I.G.A., V (1956), 23-24.

Herbert Bayer perhaps sums up the future of typography in his article on the subject when he states: "Speculation into the future (perhaps not so distant) leads me to assume that methods of communication will change drastically."¹³

Photography, which has greatly aided the field of graphic arts, is becoming even more versatile as an artist's tool. Besides the conventional methods of photography, with which those entering the field of advertising art would do well to become familiar, there are other newly developed photographic techniques. Through the use of various types of screens and photomechanical techniques a wide variety of dramatic and artistic effects can be achieved using conventional photographs. These unique effects are good in many advertising situations where something new and different is desired.¹⁴

The paper industry, which furnishes the vehicle on which graphic communications are printed, has kept abreast with the advances in the graphic arts. "Paper has played an important part in the creation of printing, which is the source of all our modern-day progress and learning."¹⁵ The progress in the paper industry has been tremendous. A vast variety of paper stocks in numerous colors, weights, and surface types

¹³Herbert Bayer, "On Typographics," Print, XIV (January-February, 1960), 83-84.

¹⁴Jaggars, Chiles, Stovall, Camera Craft, A Catalog of Photo Line Conversion, (Dallas, Texas, 1967), p. 1.

¹⁵Brad Stephens, "Advent of Paper, Not Movable Type, Made Printing the Mother of All Our Progress," Direct Advertising, XLVI (3rd Quarter, 1960), 3.

is available for selection.¹⁶ Since the artist is responsible for planning and creating the advertisements to be printed on these papers, it is to his advantage to know as much as possible about how different papers can be used in connection with solving advertising problems.¹⁷

Printing inks have also been greatly improved and are undergoing drastic changes to keep pace with the demands of the graphic arts and advertising fields. Improved process inks for use in the full color reproductions are manufactured with very exacting control.¹⁸ Through mixed inks almost any color can be matched or achieved, providing an extensive selection of colors from which to select. It is in many cases the artist's responsibility to choose the inks for a job. If he is familiar with the variety of inks from which to choose, he can better pick inks which will assist in carrying out the advertisement.

The graphic arts are seen to have progressed very rapidly, and the progress proposed for the future appears even more rapid. A knowledge of the graphic arts is considered necessary for an artist to be better able to create artwork for this chief form of communication, as the following survey brings out.

¹⁶Fred S. Van Voorhis, editor, "Typography and Paper," Direct Advertising, LI (4th Quarter, 1965), 3.

¹⁷Fred S. Van Voorhis, editor, "Impact of Colored Paper on Graphics," Direct Advertising, LI (2nd Quarter, 1965), 5-8.

¹⁸Paul J. Hartsuch, editor, "How to Choose a Set of Process Inks," Graphic Arts Monthly, XXXVIII (June, 1966), 66-74.

In 1955, in a survey made by Richard G. Wiggin of five hundred advertising artists, agencies, and studios in New York, Chicago, San Francisco, and Los Angeles, the following lists of traits were found to be "essential to the inexperienced job seeker."¹⁹ Thus, they would be traits which necessarily should be included in the training offered in advertising art programs.

1. Ability to execute work cleanly, neatly, precisely
2. Knowledge of what constitutes an appropriate portfolio
3. A high degree of hand-eye coordination
4. An understanding of reproduction processes, of how to assemble a job and mark it up for reproduction
5. Paste-up ability
6. Knowledge of current advertising design trends
7. Willingness to serve an extended period of apprenticeship
8. Knowledge of basic typefaces
9. Ability to make simple reductions and blow-ups
10. Ability to do roughs
11. Working knowledge of two-point perspective
12. Ability to retouch and clean up a finish
13. Working knowledge of Ben Day screens
14. Ability to create original designs and ad layouts
15. Ability to translate ideas into arresting design
16. Ability to render objects in various styles and media
17. Working knowledge of three-point perspective²⁰

Over half of these traits, which are listed in decreasing order of importance, deal with the understanding of graphic arts materials and procedures. An "understanding of reproduction processes" is found to be near the top of the list. How much of this training in the graphic arts is found in college and university advertising art programs?

¹⁹Fred C. Rodewald and Edward M. Gottschall, Commercial Art as a Business (New York, 1960), p. 155.

²⁰Ibid., p. 155.

College and University Advertising Art Programs

In 1959, the National Society of Advertising Artists made a study of its three thousand five hundred members asking the question, "What is lacking in the training of art school students studying advertising or editorial art?"²¹

The following traits head the list: creative thinking; training in analyzing problems; realistic problems as assignments; merchandising, economics, and business background; production and printing knowledge; paste-up ability; typography; commercial method know-how, such as air-brush, retouching, overlays; and ability to draw.²²

Referring to the survey made by Wiggin it is seen that there is a correlation between the art abilities thought to be essential in that survey and the deficiencies in training in this survey. Many of the traits lacking are in the area of graphic arts.

Alexander S. Lawson, a professor at Rochester Institute of Technology, Rochester, New York, made this statement in 1961 concerning design courses:

It seems to me that too many design courses emphasize only the visual aspects of design. Since the students are expected to turn out contemporary layouts they therefore spend little time studying anything other than current material. By and large, their knowledge of type and the reproduction procedures is extremely sketchy. What is more, there is almost no effort spent in familiarization with the "mechanics" of printing.²³

²¹Rodewald and Gottschall, Commercial Art as a Business, p. 156.

²²Ibid., p. 156.

²³Alexander S. Lawson, "How R. I. T. is Preserving Traditions of Craftsmanship in Printing," Direct Advertising, XLVI (1st Quarter, 1961), 21-23.

As a means of determining the extent to which commercial graphic arts materials and procedures are a part of college and university advertising art programs of the present, a study was made of ninety-six colleges and universities in the United States which offer degrees in advertising art. The results of this study are in the Appendix and are discussed in Chapter V. In Table I it is evident that an average of eighteen hours of courses included in the advertising art programs offer instruction in commercial graphic arts materials and procedures. This indicates that art departments have expanded their advertising art programs to cover more fully this necessary area of training in advertising art.

While progress has been and is being made in the addition of graphic arts training in college advertising art programs, there must be a constant up-dating of this training in order to keep abreast with the advances made in the graphic arts. Neither the complexity of the graphic arts nor its rapid progress should deter those who plan college advertising art programs from including training in the basic understanding of graphic arts materials and processes, and in keeping such training up to date. The technical advances made in graphic arts tend to simplify the artwork preparation of the advertising artist and to allow greater flexibility in the kinds of material, methods of working, and means of reproduction from which to choose.²⁴

²⁴Ken Garland, Graphics Handbook (New York, 1966), p. 45.

CHAPTER II

RECENT COMMERCIAL GRAPHIC ARTS MATERIALS AND PROCEDURES STUDIED

Graphic Photography

Linescreen Process

The term "graphic photography" is used in this study to differentiate between conventional photography and the photomechanical work that is done in printing and engraving establishments. In conventional photography the negatives and resulting prints are referred to as "continuous tone". This means that "the detail and tone values of the subject are reproduced by a varying deposit or density of the developed silver in the picture."¹ In contrast to continuous tone work, graphic photography produces "line" negatives and prints in which the detail and gradation of the tones are usually represented by dots or lines of varying sizes.² Figures 1 and 2 show the differences between the two types of reproduction.

¹The Midwest Litho Trade Association, Litho Lingo (Ennis, Texas, 1967), p. 5.

²J. S. Mertle and G. L. Monsen, Photomechanics and Printing (Chicago, 1957), p. 1.



Fig. 1--Continuous tone



Fig. 2--Halftone screen

The most commonly used form of reproducing continuous tone pictures in the graphic arts is the halftone screen process, which breaks up the tones of the original photograph into varying sized dots as shown in Figure 2. This method serves very well to illustrate accurately the original tones and detail of photographs.

Due to the search for other methods of reproducing photographs other than the standard halftone method, many new and different photomechanical techniques have been developed by the graphic arts industry. One of these, the "screenline" process, while it is not really new, is "enjoying a rebirth that is universal in scope."³

In the screenline process the tones of the original are reproduced in lines of varying widths rather than with dots. A more striking tonal contrast between black and white can be achieved by this technique than with the halftone method.

³Kimberly-Clark Corporation, "Art Director", Kimpressions (Issue No. 6, 1964), p. 3-4.

With the use of different types of linescreens many unique effects can be achieved in far less time than it would take an artist to render the same effect by hand. Figure 3 illustrates one of the screenline techniques.



Fig. 3--Straight line linescreen

In 1964, Photo Research and Development (Rogers) of Miami, Florida, introduced a line of special effects screens that have done much to make screenline practical and within the cost range of halftones.⁴ The various screens are shown in Figure 4.

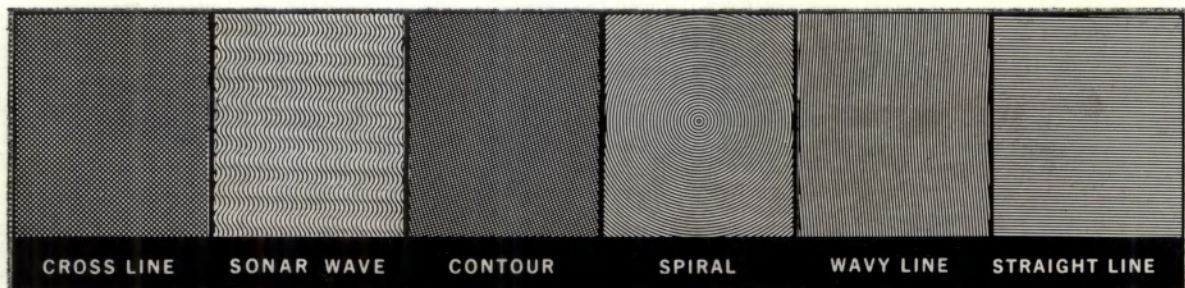


Fig. 4--Rogers screenline screens

⁴Kimberly-Clark, Kimpressions, p. 3.

Since the introduction of these screens, screenline copy has been used successfully in newspapers, magazines, posters, packaging, direct mail, and television.⁵ Examples from various forms of printed matter showing the use of screenline prints are shown in Figures 5 and 6.

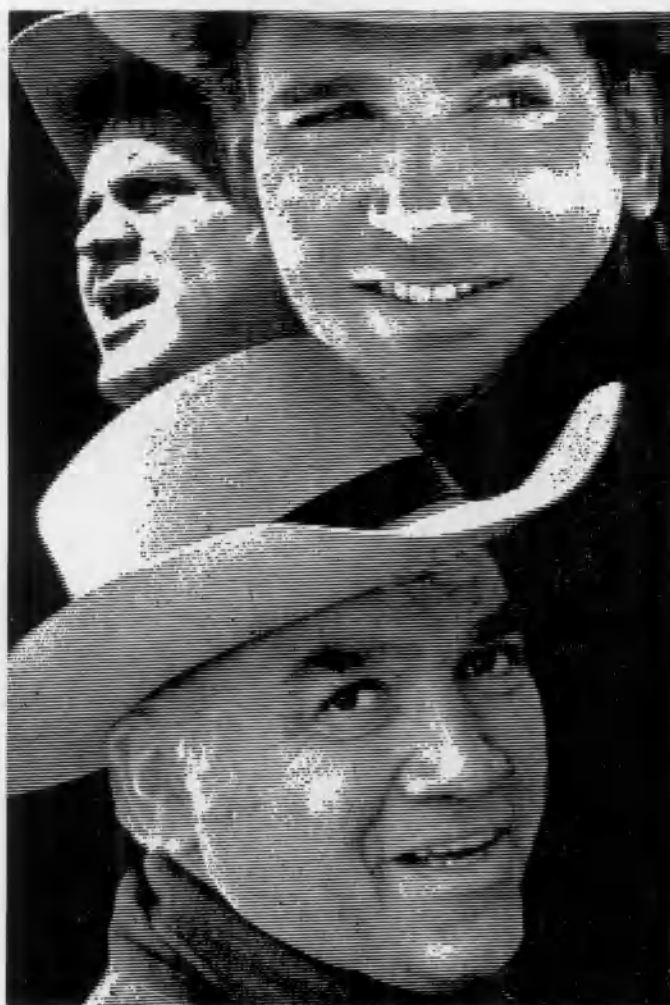
An artist who is considering using screenline prints for new and different special effects should exercise more care in the selection of subject material than he would for the standard halftone. The following factors should be kept in mind:

1. The photograph should be rather high in contrast.
2. There will be a loss of fine detail in the screening process.
3. Since the most dramatic screenline reproductions utilize solid black shadows and pure white highlights, there will be a greater loss of detail in these areas.
4. When using the spiral screen there should be a sufficiently important single point of interest that can serve as the focal point of the screen.⁶

After the best photograph has been selected, the printer or engraver will need to be given additional information. This is usually placed on a tissue overlay over the photograph that is to be used. In some instances the negative as well as the photograph may be needed. The following information should be included in the instructions:

⁵Jaggars, Chiles, Stovall, Camera Craft (Dallas, 1967), p. 1.

⁶Kimberly-Clark, Kimpressions, p. 4.



Pappagallo

is a
sandal

33 HIGHLAND PARK
SHOPPING VILLAGE
528-7330

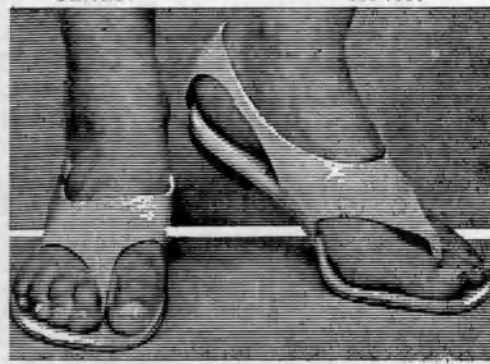


Fig. 5--Examples of the use of screenline prints



Fig. 6--Examples of the use of screenline prints

1. Type of screen line process desired.
2. In the screens with patterns running in one direction, the desired direction should be indicated such as: vertical, horizontal, or in line with some element of the picture.
3. With a spiral screen the focal point should be designated exactly.
4. The degree of contrast can be varied and controlled, so the approximate degree of contrast desired can be indicated.⁷
5. The "line count", or measurement of the coarseness of the screen wanted, should be given in lines per inch. This will vary in number depending on the method of reproduction that will be used on the final printed piece. A coarser or more widely spaced line-screen of 55 to 65 lines per inch should be used in newspaper work while 100 and even finer line screens may be used on better papers by other printing methods. These finer screens are not nearly as widely used as the coarser screens because the "line effect" is lost when the screens become too fine and the print resembles a standard halftone.

The artist receives from the engraver or printer a photographic print made from the line negative. This print can be retouched with black and white paints in order to increase highlight areas, block out areas of black, or add in black detail. If the screen lines are large enough, they may be retouched with matching lines of black or white drawn in on the print. After retouching, the print can be pasted up or assembled with the type and other material used in the design. It will be rephotographed in this retouched form when the artwork is reproduced.

⁷Kimberly-Clark Corporation, Photo Mechanical Techniques, Kimberly-Clark Educational Books for the Graphic Arts Industry, 1966, p. 6.

Irregular Pattern Screens

At the same time that Rogers Incorporated introduced the screenline screens, they included four other screens, shown in Figure 7. These screen patterns represent some of the oldest forms of achieving tones. They were used in the very early methods of the graphic arts: etching and lithography.⁸

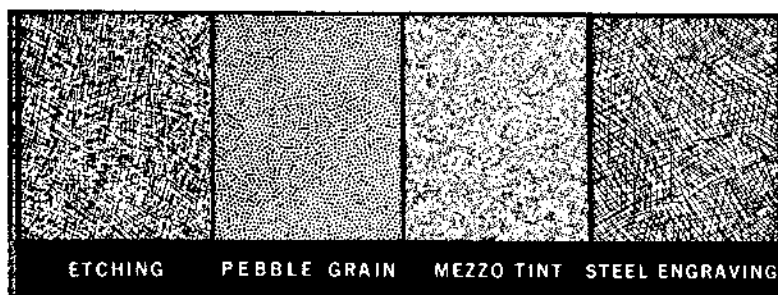


Fig. 7--Rogers irregular screens

With the introduction of these screens the patterns have been used successfully in achieving artistic effects from continuous tone photographs. Unlike the regular pattern screens, these screens have no line count. They can be varied in coarseness, however. The method by which the final piece is to be reproduced should be indicated in the instructions so that the engraver or printer may choose the necessary coarseness of screen. Examples from various forms of printed matter illustrating the use of some of these irregular screens are shown in Figure 8.

⁸Kimberly-Clark Corporation, "Special Screening Techniques," Photo Techniques for Printers and Platemakers, (1965), p. 3.



Fig. 8--Examples of the use of irregular screens

Posterization

Another photomechanical technique used in the graphic arts to produce artistic effects from continuous tone pictures is posterization. This technique began in the silk-screen industry as a means of reproducing the values in pictures for posters. The halftone method with its varying sized dots could not be used in the silk-screen process; so the procedure of posterization, which separates the various values of the picture, was developed. Separate line negatives are made for each of the main value areas of the picture from black to white. The number of values used varies from two to five or six. Generally there are three: a black, a middle tone, and the white or color of the printing surface forming the third value.⁹ Figure 9 is an example of posterization used on a large outdoor poster.



Fig. 9--Posterization on a poster

⁹Kimberly-Clark, Photo Techniques, p. 4.

Using the same basic techniques of silk-screen posterization, printers and engravers have developed a form of posterization for use with other methods of reproduction. In the silk-screen process the separate values are printed in solid areas of various shades of ink from black to white. With other means of reproduction such as offset and letterpress printing, these separated values can be reproduced using only one color and different per cent screen tints of it for the grays.¹⁰

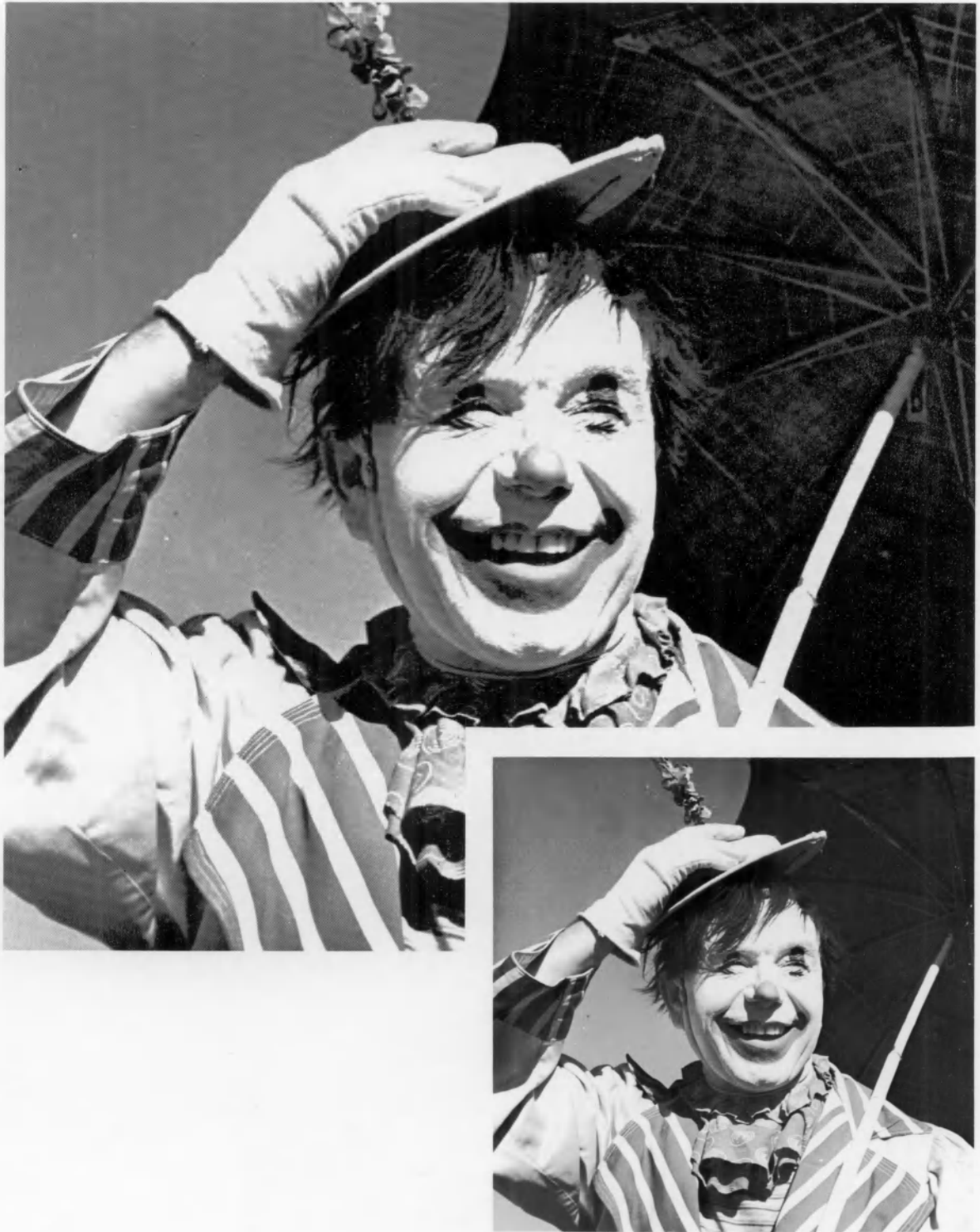
Pictures reproduced by the posterization process retain much of the realism and detail of the subject, but there is a unique quality which is distinctive and different.¹¹ Figure 10 is a posterization print made for this study. In it only two values were separated, the black and a middle tone of forty per cent screened black. The white background forms the third value.

Choosing the original photograph is always important in any photomechanical technique. Dramatic effects can not necessarily be achieved from every photograph, but often a dull, uninteresting subject can be revived through posterization.¹² The following points should be considered in selecting a photograph:

¹⁰Kimberly-Clark, Photo Techniques, p. 4.

¹¹Jaggars-Chiles-Stovall, Inc., J C S Camera Craft, (1966), p. 36.

¹²Ibid., p. 36.



original photograph

Fig. 10--Posterization

1. The photograph should be high in contrast with a good tonal range from black to white.¹³
2. The interesting or important items in the photograph will show up better if they are of a different or contrasting value from their surrounding area. Items which blend gradually into the surrounding tones tend to become blurred.¹⁴
3. There will be some over-all loss of detail, but this varies with the number of values separated. The more values that are separated, the more detail is retained. Generally not more than four values should be used because the result will resemble too much an ordinary halftone reproduction.¹⁵

A posterized picture may be retouched either by the printer or engraver on the negative or by the artist on a print from it. The artist can use white for adding highlights and blocking out areas of gray and black. Black areas can be added and detail put in with black lines. Since the gray areas are composed of screen dots or lines, they can not usually be retouched unless the screen pattern is large enough to allow it.

Any of the line-screen processes may be used for the screened values of the posterized picture. This enables the artist to gain a double effect by using one of the interesting screenline patterns in conjunction with posterization.

¹³Harold J. Stoeppelmal, "Using Posterization Techniques," Kimpressions, (Issue 2, 1964), pp. 5-6.

¹⁴Kimberly-Clark Corporation, Photo Design for Lithofect Series, (1965), pp. 4-5.

¹⁵John A. C. Yule and Richard E. Maurer, "A Simplified Posterization Technique," Kodak Bulletin for the Graphic Arts, (No. 6, 1966), p. 14.

Another interesting variation possible in posterization, is the use of different colors for the separated values. By selecting the appropriate colors for the different values a fairly realistic color effect can be achieved from a black and white photograph. Colors may also be selected for the values simply to achieve unique effects without attempting a realistic effect.¹⁶

Since the posterization process can produce a wide range of effects from an original photograph, it is difficult for the artist to specify the effect wanted. One who is considering using posterization should obtain a catalog of samples of the process from some graphic arts establishment, if such is available, or make his own collection from samples out of advertisements found in printed material. When an effect similar to the one desired can be found, this facilitates the artist in discussing with the printer or engraver what he wants from the photograph.¹⁷ Again, the effects are limited by the photograph that is used. An effect produced with one photograph will not necessarily work out the same on another one. The other basic instructions such as the type of screen to be used, line count of the screen, and number of tones may be designated in the written instructions. If at all possible it is advisable to

¹⁶Kimberly-Clark, Photomechanical Techniques, p. 19.

¹⁷Statement by a cameraman in a Dallas, Texas, graphic arts firm, May 1, 1968.

select the sample of the effect desired and take it and the photograph to the printer or engraver. Complete instructions may then be worked out together to achieve the best effect.

Thus, posterization offers the artist a wide range of new and different effects. Since posterized pictures are done on a "custom-made" basis, they are generally more expensive than the conventional halftone process. The interesting effects achieved by posterization can usually be done with far less time and expense than similar effects by hand. It is presented as a new and convenient tool for the artist designing works for graphic reproduction.

Line- and Tone-Line Conversion

Using basically the same process as posterization, a continuous tone photograph can be reduced to its basic areas of blacks and whites. The resulting prints from the line conversion process resemble a pen or brush and ink drawing. Only the darkest elements of the original photograph print, leaving the lighter areas as white.¹⁸ The high contrast of these line conversion prints makes them ideally suited for strong dramatic presentations of subject matter. Figure 11 shows the use of line conversion.

Tone-line conversion is slightly different from line conversion in that the blacks and whites are broken down further. "Greater detail and apparent tonal gradation is possible with tone-line conversion because areas that ordinarily become

¹⁸Jaggers-Chiles-Stovall, Camera Craft, p. 8.



Fig. 12--Tone-line conversion

Fig. 11--Line conversion

solid black or white with line conversion are broken into smaller areas."¹⁹ Tone-line conversion produces an effect similar to that of irregular screen patterns with the grays achieved through small, irregular black and white patterns from the photograph.²⁰ Figure 12 illustrates the use of tone-line conversion. The differences between the two processes can be noted by comparison of Figures 11 and 12.

The same basic principles that apply to selecting photographs for other photomechanical processes hold true in line- and tone-line conversion. If the artist is making the photograph to be used in the process he can get much better results by observing the following points:

1. The important details or subject should be modeled by strong light and shadows.
2. Photographs made on bright sunny days or with strong artificial lighting have better contrast and convert better.
3. For line conversion with a very high contrast, photographs may be made with the subject silhouetted against the sunlight or a bright surface.
4. In tone-line conversion subjects with smooth or uniform surfaces will not offer as satisfactory results as those with varying textures.²¹

The artist can retouch photographic prints of line- and tone-line conversions with black and white paints. Unlike

¹⁹Jaggars-Chiles-Stovall, Camera Craft, pp. 12-13.

²⁰Ibid., pp. 12-13.

²¹Ibid., pp. 12-13.

prints from posterization and some line screen prints where he is limited in his retouching, in line- and tone-line prints any area can be retouched at will. This retouching is often necessary to bring out details that are lost in the processes. More detail is lost in line conversion than in tone-line conversion, and both of these processes generally lose more detail than the other procedures discussed. By choosing a suitable photograph in which the loss of detail will not block out the main subject an artist can use line- and tone-line conversion as a short cut to achieve dramatic and striking art effects.

In the January, 1968 issue of Art Education magazine, Burton Wasserman wrote an article on Eugene Feldman and his use of lithography as a fine arts medium. In the illustrations of Feldman's work the use of posterization and line conversion techniques for fine art effects is apparent.²²

Another time-saving device for the artist is the use of tone-line conversion for making line drawings or technical illustrations from conventional photographs.²³ This process was developed by Eastman Kodak Company in 1953. It involves an extra step, using a positive mask with the negative obtained in

²²Burton Wasserman, "Eugene Feldman: Offset Lithography as a Fine Art Medium," Art Education, XXI (January, 1968), 19-25.

²³Harold C. Latimer, Advertising Production Planning and Copy Preparation for Offset Printing (Norwalk, Connecticut, 1965), p. 113.

tone-line conversion.²⁴ The resulting prints are very close to line drawings, often requiring very little retouching by the artist. Even if retouching is necessary, drawings of many subjects are produced very quickly by this method. "The total time required in the photographic darkroom averages between one-third and one-half of the time that would normally be required to render the same subject by hand."²⁵ Figure 13 illustrates this process.

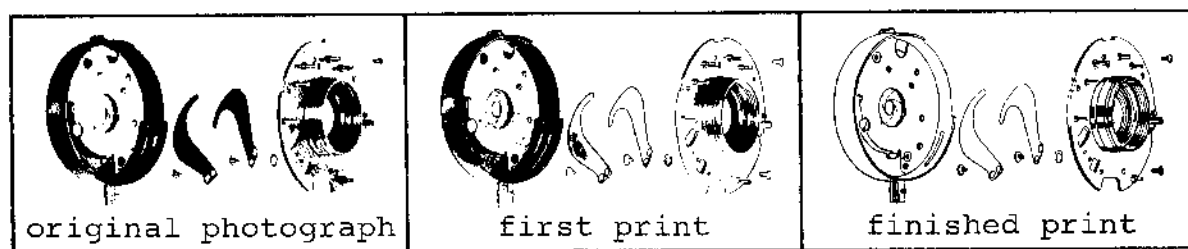


Fig. 13--Line drawing from a photograph

An artist who is considering using this process of conversion should keep the following in mind:

1. The printer or engraver usually prefers to work from a continuous tone negative. If the artist is making or having the pictures made, he should send both the negative and a print.
2. It is essential that it should have sharp detail in both highlights and the shadows, and preferably be larger in size. The resulting print would then be larger and could be more easily retouched. Then in the final reproduction it would be sharpened by its reduced size.²⁶

²⁴Kimberly-Clark, Photo Techniques, p. 6.

²⁵George W. Thompson, "Line Effects from Photographs," Kodak Bulletin for the Graphic Arts, (No. 9, 1967), 1-9.

²⁶Harold J. Stoeppelmal, "Line Drawings from Photos Photographically," Kimpressions, (Issue 4, 1964), 13.

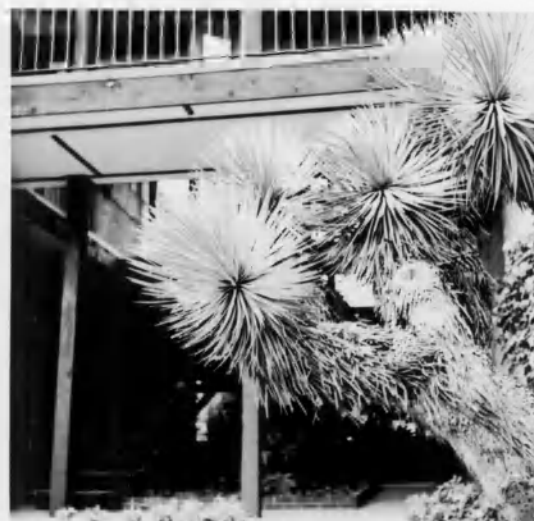
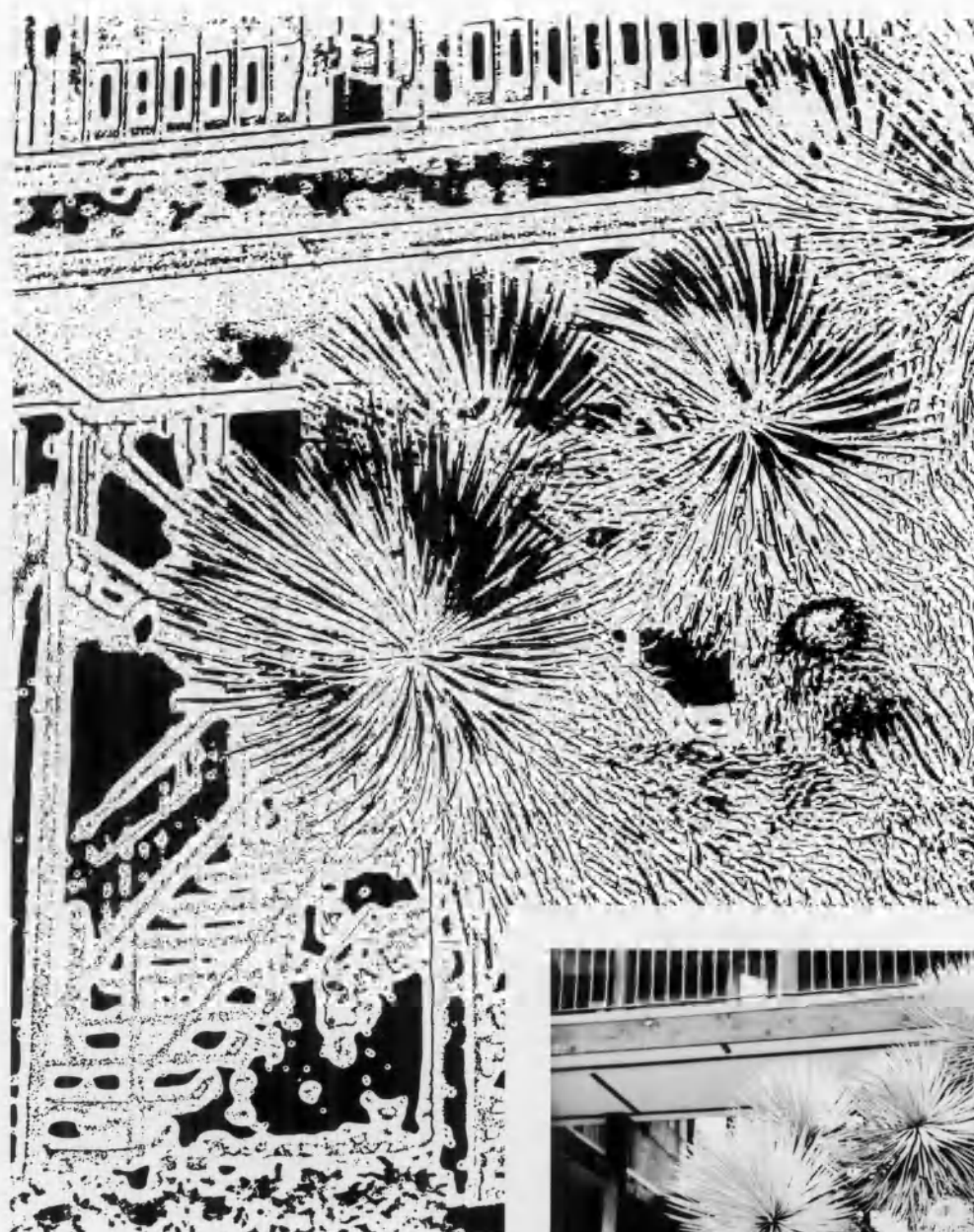
Besides its use as an aid in producing technical illustrations and drawings, the artist can, through the selection of a suitable photograph, use the process as a means of creating unusual pictorial renderings. A subject with a considerable amount of linear details works best for these effects. As is true with all the processes, a photograph with good contrast and tonal range is needed to achieve the best results.²⁷ Figure 14 illustrates the use of the effect. While every subject will not produce a good or pleasing line drawing, the process may often be used as a time- and labor-saving device for the artist.

The information on these current photomechanical techniques used in graphic photography was taken primarily from technical booklets published for the graphic arts industry. The names of some of the effects were found to differ in some instances, but those used in the study are the most commonly used terms. It is hoped that more artists will become aware of these procedures since "used with imagination and good judgment, 'Photomechanical Techniques' can open new avenues of design to the designer and provide new opportunities for printers and platemakers to serve customers more creatively."²⁸

The experiments in Chapter III were done as a part of this study to show the creative use of some of these photomechanical techniques alone and in combination as a means of designing advertising art.

²⁷Thompson, "Line Effects," Kodak Bulletin, pp. 1-9.

²⁸Kimberly-Clark, Photomechanical Techniques, p. 1.



original photograph

Fig. 14--Line drawing from a photograph

Printing Processes

Within the graphic arts field it is the printing industry that produces the final products of the advertising artist's work. It is in the printed form that the public will view the advertisement and thus complete the communication between the producer and consumer. Much of the progress made in the printing industry has involved improvements in the basic traditional means of printing: letterpress, etching, and lithography. Nevertheless, photography and photo-mechanics are beginning not only to improve the old methods of printing but also to create new methods.²⁹ The artist can not be expected to understand all of the mechanics of these new advances in printing, but he should be familiar with basic printing methods and be aware of new methods.³⁰

Xograph Printing Process

Perhaps the most strikingly new and different printing process developed in the past ten years is the Xograph process, by Visual Panographics, Incorporated, of New York, New York. By this process pictures may be rendered in full color with an illusion of three-dimensional depth and roundness. The process represents an attempt by the graphic arts to reproduce printed pictures with even greater realism than the usual full color techniques.

²⁹Victor Strauss, The Printing Industry (New York, 1967), p.8.

³⁰Claire Roth and Adelle Weiss, Art Careers (New York, 1963), p. 15.

There had been attempts at producing three-dimensional effects with paintings as far back as the seventeenth century. In 1692, Bois-Clair, a French artist, discovered that by placing a grid between his painting and the viewer he could achieve an illusion of depth. If the viewer looked at the painting from one side he saw one scene and from the other he saw a different view of the scene.³¹

Further experiments by scientists led to the development of other methods of producing three-dimensional effects. One of these was the stereoscope, which superimposed two photographs by means of a hand-held optical device. In 1950 the "Anaglyph" process was developed, which involved printing two pictures in two different colors. By wearing glasses with lenses in the same colors an illusion of depth was created for the observer. The same method with modification was used in "3D Movies".³²

The developers of the Xograph process wanted more than the stereo effects which these earlier attempts produced. They wanted to create a realistic three-dimensional effect in which the viewer could have the illusion of seeing around objects without the aid of any special glasses or extra hand-held devices. In 1960 the first pictures were printed by the Xograph process. In these pictures the illusion of depth was achieved through photographing the subject with a new

³¹Marvin C. Whatmore, Revolution in Three-Dimensional Printing (New York, 1965), p. 2.

³²Ibid. , pp. 3-4.

specially developed camera and printing it in a fine screen dot pattern similar to the straight-line screen. This divided the photograph into tiny parallel vertical strips. Next a layer of clear plastic with a similar vertical grid pattern embossed in it is laminated to the printed picture.³³ Figure 15 shows these layers.



plastic picture
over picture

Fig. 15--Layers of a Xograph print

When the viewer looks at the print, each of the embossed lines in the plastic area acts as an optical prism which focuses on various lines of the printed picture underneath. Unlike the previous methods of stereo viewing, where only two photographs are superimposed, the Xograph process has "literally thousands of tiny pairs"³⁴ of stereo effects which take place. This gives the pictures a greater three-dimensional illusion than any other process ever developed. Figure 16 is an example of Xograph printing.

³³Whatmore, Three-Dimensional Printing, pp. 4-7.

³⁴Ibid., p. 7.



Fig. 16--Example of Xograph printing

Since its beginning in 1960 the Xograph printing process has been used in magazines for covers and advertisements, sale promotion mailing pieces, postcards, record jackets, and packaging. Unlike conventional printing processes where the artist can furnish a photograph or slide of the subject to be printed, a special camera must be used in making the picture for Xograph printing. This camera is very large and is mounted on a truck. Generally two days are needed to photograph the picture, one for calculating the planes of depth and "aim points" on the subject and one for the actual shooting. All of this camera work is done by the technicians of the

Xograph Company.³⁵ The picture is then printed on specially equipped Xograph presses. As a result of the camera work and special press work, the process is more expensive than conventional color printing, especially on small orders. For larger orders the price per copy is less.³⁶ For example, an Xograph advertisement which appeared in the 8,000,000 copies of Look magazine cost two and one-half cents per copy.³⁷

The type or copy for the advertisement may be printed along with the Xograph photograph. This is photographed separately by conventional graphic means so that it will be clear and sharp, instead of screened by the linear screen used in photographing the picture. Larger type, from ten points upward, should be used for the copy because the plastic grid over the picture causes some distortion, especially in small type. Often where it is used the Xograph picture is tipped-in or glued onto a page which already has the body copy printed on it by conventional methods of reproduction.

Another form in which the Xograph printing process may be utilized is in sheets with pre-printed three-dimensional background patterns on them. These pre-printed patterns consist of a series of diagonal lines printed by the Xograph

³⁵Whatmore, Three-Dimensional Printing, p. 5.

³⁶Letter from Grahame Enthoven, Advertising Manager, Visual Panagraphics, Incorporated, April 24, 1968.

³⁷Whatmore, Three-Dimensional Printing, p. 9.



Fig. 17--Sample of pre-printed Xograph sheet

process and covered with the plastic grid. They add an illusion of depth and movement to the sheet. See Figure 17. This new material has just become available to the advertising artist in 1968. The ease with which it can be printed is spoken of in a letter from Ruben DeLuca, Product Manager of Celutone Plastics, the company which manufactures the Xograph sheets. In the letter DeLuca states that "Xograph sheets can be printed easily by offset, silkscreen, or letterpress, without special equipment, inks, or technology."³⁸

The printing on these Xograph sheets is not three-dimensional in itself, but because the sheet has the pre-printed pattern on it, type and pictures appear to float out from the surface. This effect is ideal for promotional material since it can be prepared like conventional printing on paper, but

³⁸ Letter from Ruben DeLuca, Product Manager, Celutone Plastics, May 9, 1968.

according to an advertisement in Art Director magazine, "Xograph will generate customer interest and attention as no ordinary paper can."³⁹ Economically Xograph sheets are more practical than Xograph printing, especially for smaller orders.

In general, anything that can be printed on paper can be printed on the prepared Xograph sheets. The greatest illusion of depth may be created by printing large bold open type faces and artwork with exaggerated perspective. Halftones in any screenline pattern may also be printed on the Xograph sheets.⁴⁰

The Xograph printing process and pre-printed Xograph sheets are thus two very new, exciting, and different means available for the advertising artist's use. Marvin C. Whatmore, president of Visual Panagraphics, Incorporated, had the following to say about the future of Xograph printing processes in a speech he made in 1964 to the Sales Promotion Executives Association of New York City:

Initially, 3D printing will be used to get high impact in introducing new products or for special promotions. But, as production time improves, 3D printing promises to have universal application. Use can be extended to fine arts, particularly sculpture, architecture and archeology, and may make an important contribution to the process of teaching and understanding.⁴¹

³⁹Celutone Plastics, "Try Xograph Sheets for Your Next Promotion," Art Direction, XX (April, 1968), 143-144.

⁴⁰Celutone Plastics, "Xograph is What's Happening in the World of Promotion!," Sales promotion folder, New York, 1968.

⁴¹Whatmore, Three-Dimensional Printing, p. 12.

Typography

It was stated in the introduction that the advertising artist must understand typography, and that this area of the graphic arts is undergoing rapid change. The term typography has a broader meaning than typesetting. Typesetting refers to the various forms of hand- and machine-set type.⁴² Typography refers to the art of composing and printing with type."⁴³ Both are important in the creation of printed matter which is functional and aesthetically pleasing to the reader. Since typesetting is the tool which provides the type for typography, much of the advance in typography has been because of new methods in typesetting.

Phototypesetting

Perhaps the greatest factor in the recent advances made in typography has been the use of phototypesetting.⁴⁴ "There has been remarkable progress in the field of phototypesetting."⁴⁵ In the process of phototypesetting, type is set photographically with no metal type involved. The font, or size and style of type to be used, consists of a photographic negative of the characters and symbols. These are arranged either in a

⁴²Berny Engel, "Typography vs. Typesetting," Kimpressions (Issue 1, 1964), pp. 15-16.

⁴³Edward M. Allen, editor, Harper's Dictionary of the Graphic Arts (New York, 1963).

⁴⁴Van Voorhis, "Typographics," Direct Advertising, p. 23.

⁴⁵Paul J. Hartsuch, "Graphic Arts Progress in 1967," Graphic Arts Monthly XXIX (January, 1968), 61.

circle on a plastic disk or in line on a strip of flexible film. The disk or strip with the negative characters on it is placed in the phototypesetting machine, and a roll of light-sensitive photographic paper is placed under it. The operator then types either manually or by means of a punched tape. When the desired character is struck, the corresponding negative one on the disk or film is positioned over the photographic paper and exposed to a light. Thus, the characters are in effect a series of photographic prints. After the type is set, the paper is developed and may be pasted down in this form on the artwork. Phototype is sharper and cleaner than metal type. This makes it an excellent choice for copy that is to be rephotographed for offset reproduction. Figure 18 is a sample of phototypesetting.⁴⁶

Univers Medium Extended No. 53 — 10-12-14-18-24S-24L-30-36 (Fdy.)
TU-21 — Photo Set in Any Size

ABCDEFGHIJKLMN OPQRST
abcdefghijklmnop \$1234567

Univers Demi-Bold No. 65 — 10-12-14-18-24S-24L-30-36-48 (Fdy.)
TU-1 — Photo Set in Any Size

ABCDEFGHIJKLMN OPQRST U
abcdefghijklmnopqrstu \$123456

Univers Demi-Bold Italic No. 66 — 10-12-14-18-24S-24L-30-36 (Fdy.)
TU-8 — Photo Set in Any Size

ABCDEFGHIJKLMN OPQRSTU V
abcdefghijklmnopqrstuv \$12345

Fig. 18--Sample of phototype

⁴⁶R. Randolph Karch, Graphic Arts Procedures (Chicago, 1957), p. 322.

Many newspapers and publishing houses have turned to phototypesetting. In combination with electronic computers fantastic typesetting speeds of five hundred characters per second and more have been developed.⁴⁷ These aspects of phototypesetting are primarily mechanical and are used in conjunction with metal type for the typesetting of books, newspapers, and body copy in advertisements. Typography, of course, plays its part in the formation of the original characters of the fonts, but it is another form of phototypesetting that offers the artist a wide variety and arrangement of type. This form of phototypesetting is generally referred to as photocomposition.

Photocomposition

In photocomposition, hand-operated machines that work on the same basic principles as phototypesetting machines are used. An operator can set type in many different styles and variations for use as captions, subheads, and other type needs in advertisements and artwork. Text type is not set, since it can be done faster by other means. In a recent model photocomposition machine called Photo Typositor, made by Visual Graphics Corporation of New York, New York, different lenses may be used to alter a single font of type into 2,800

⁴⁷Hartsuch, "Graphic Arts Progress," Graphic Arts Monthly, p. 61.

different sizes, slants, and proportions.⁴⁸ Multiplying the 2,800 alterations possible in one font by the six hundred fonts available, there are 1,680,000 different alterations of type faces from which to choose. In addition, twenty-eight screens and patterns of varying textures, tint values, and line counts add still more choices and variations to the type.⁴⁹ Figure 19 shows some of the variations possible from a single letter and some screen effects.



SHADOWS & SCREENS

Fig. 19--Variations of type on Photo Typewriter

⁴⁸Visual Graphics Corporation, "Typography and Lettering as Produced on the Photo Typewriter," New York, 1966, promotional bulletin, p. 11.

⁴⁹Ibid., p. 22.

The Photo Typositor is not just a typesetting machine but a source of almost unlimited composition with type. Therefore, it fits within the category of typography to the fullest sense. In ordering type set by photocomposition an artist needs only to prepare his rough layout and indicate lettering or areas for the type to be set. Using this as a guide, the operator of the machine can set very closely any indicated type or arrange it within any desired area.⁵⁰ In addition to making changes in size, slant, and proportion, type fonts may be mixed, overlapped, and spaced visually on the Photo Typositor.⁵¹ The type comes from the machine in the form of a strip of photographic paper with the lettering developed on it. These strips are ready for the artist's use in pasteup. If further alteration is needed the artist can cut the strips and reposition the characters. Figure 20 is a sample strip from a Photo Typositor machine showing some arrangements.

Camera Modification

Many typesetting establishments have added phototypesetting equipment along with their metal type and are providing the artist with greater selections of type and typographic services than ever before. In addition to phototypesetting

⁵⁰Visual Graphics Corporation, "Photo Typositor," p. 10.

⁵¹Ibid., pp. 3-26.

BIG^{OR}_{SMALL} photo^{PHOTO}

CHRIS CRAFT Yachts real sippin' Coffee! **BENDY**

Fig. 20--Compositions made on Photo Typositor

and photocomposition, some camera departments of typographic establishments offer many other services, such as screen-line screens, posterization, and line- and tone-line conversion processes. These may be obtained in the form of photographic prints or in the form of mats for use in letterpress reproduction.

Another service offered by some departments is camera modification of type and artwork. This service may be used as a labor-saving device for the artist who is seeking to use type in an unusual perspective or curved manner. The type or artwork may be photographed in any perspective view by placing

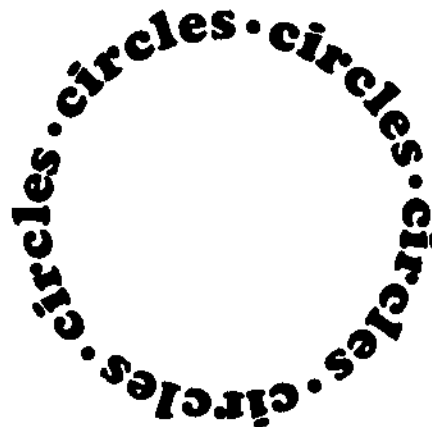
lenses of varying optical properties between the camera and the work. It can be made to appear wavy, curved, stretched, or condensed.⁵² Type can be made into a circle with a special circular mirror device. Figure 21 shows some camera modification effects.

• circles • circles • circles • circles • circles

ORIGINAL



ORIGINAL



JOHN A. SCOTT COMPANY, Inc. • 2812 Taylor Street, Dallas, Texas

ORIGINAL

JOHN A. SCOTT COMPANY, Inc. • 2812 Taylor Street, Dallas, Texas

JOHN A. SCOTT COMPANY, Inc.

JOHN A. SCOTT COMPANY, Inc. • 2812 Taylor Street, Dallas, Texas

Fig. 21--Camera modification effects

⁵² Southwestern Typographics, Incorporated, Typographics Specimens, Dallas, Texas, 1965, p. 2.

The camera which is equipped for camera modification may also be used to photograph three-dimensional objects in any perspective view, either normal or distorted, with the type on these objects in sharp focus. The resulting photographic print of the subject gives the artist the lettering from the label or packaging in its correct or distorted perspective. This may be pasted up as type copy on an illustration or drawing of the container. A line-conversion print of the container may also be made. Figure 22 shows examples of this use of camera modification.



Fig. 22--Line photographs of three-dimensional objects

An artist can greatly aid the cameraman in achieving the desired modification of works by indicating on tracing paper the area, shape, or view he wants. The cameraman can then place this tracing paper on the focusing glass of the camera and make the necessary focal adjustments to modify the work more exactly as indicated.⁵³

Phototypesetting, photocomposition, and camera modification are three recent procedures available to the advertising artist from the typographic field of the graphic arts. These procedures may be used in countless creative and labor saving ways by the artist in preparing type and artwork. In effect they have "but one limitation. . . imagination."⁵⁴

Other Graphic Arts Materials and Procedures

According to the definition of graphic arts, the fields of paper and ink manufacturing are included. Since these industries furnish the actual materials from which the final printed works are composed, the advertising artist would do well to keep current his knowledge of the products furnished by these two industries.

⁵³Statement by cameraman of a typographic firm, May 1, 1968, Dallas, Texas.

⁵⁴John A. Scott, Incorporated, Type Catalog, (Dallas, Texas, 1964), p. 2.

Paper

The paper industry has worked "hand in hand with the tremendous forward strides of the graphic arts industry. . ."⁵⁵ Papers of many surfaces, coatings, textures, and colors have been developed for the latest methods of printed reproduction. Specially coated white papers were developed for use in full color reproduction. The quality of these papers has made considerable improvement in the quality of full color printing.⁵⁶ Special effect papers have been made available for use in advertising and packaging. Figure 23 shows some samples of unusual special-effect papers. Since the artist is often the one who selects the paper for a printing job, he should be familiar with new papers as they become available.

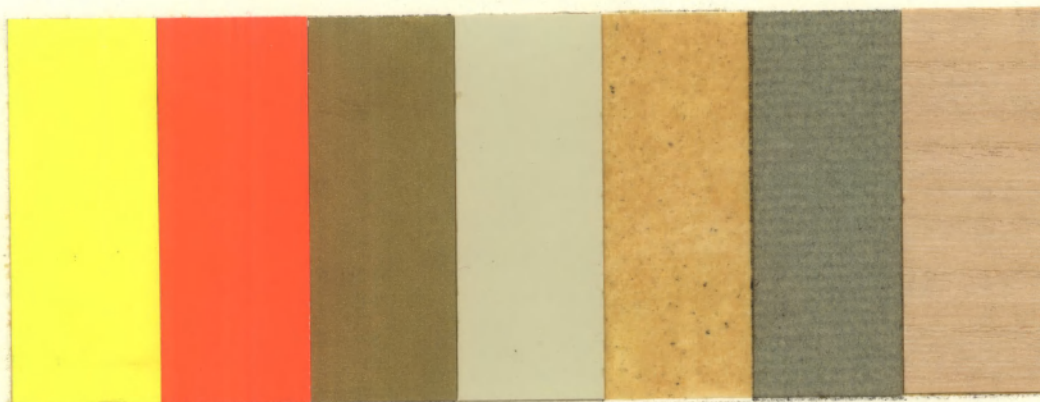


Fig. 23--Special-effect papers

⁵⁵Walter W. Roehr, Paper and the Graphic Arts, (Neenah, Wisconsin, 1960), p. 1.

⁵⁶S. W. Warren Company, "The Influence of Paper on Color Printing," Bulletin No. 6, (July, 1968), pp. 14-16.

The wide range of colored papers now available may be used in many ways. One interesting method is to print on them with colored or black inks and allow the color of the paper to become a part of the design. Various ink and paper companies have prepared charts showing the color combinations that may be achieved with this printing procedure.⁵⁷ The number of color combinations may be increased by using both opaque and transparent inks. An artist who is considering using colored inks on colored paper should consult one of these charts in order to judge the effect without expensive experimentation. Although colored paper is generally more expensive than white paper, the unusual effects that can be achieved with it would often warrant the expense.

As more and better colored papers appear on the market, they are beginning to be used in place of solid colors printed on white paper. Often the effects achieved with colored inks on various textured colored papers are "appealing and suggestive of the tactile qualities of the product being sold."⁵⁸ Colored paper can thus be an economical way to provide additional color and may be used to conform with the actual color and tactile properties of products in advertising and packaging.

⁵⁷Paul J. Hartsuch, "New Visual Guide for Color on Color Printing," Graphic Arts Monthly, XXIX (May, 1967), 98-104.

⁵⁸Robert Malone, editor, "Packaging, Colored Paper for Packaging," Industrial Design, II (January, 1964), 83.

Printing Inks

Colored inks for printing are not new, but there has been a tremendous increase in their use for all forms of printed material in recent years. Ink manufacturing companies have developed many new and improved colored inks to meet the increased demands of colored printing. The following quotation is from an advertisement by an ink company:

Over the last few decades the story of visual communication in the graphic arts has been COLOR-COLOR- COLOR. Color in ever increasing volume with ever more demanding standards of excellence.⁵⁹

One of the most common uses of colored inks is for full color reproduction of pictures. In this printing procedure known as the four-color process, four colors of inks are used. Samples of these inks are shown in Figure 24. Through constant research these inks have been improved until pictures printed with them by the four-color process are amazingly accurate.⁶⁰ An artist, planning on using four-color process, should work closely with the printer in selecting the best set of process inks.

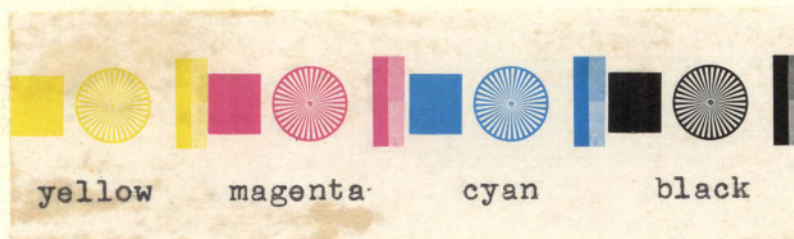


Fig. 24--Process inks

⁵⁹Form letter advertisement from Switzer Brothers, Incorporated, Cleveland, Ohio, August 3, 1967.

⁶⁰S. D. Warren Company, "Influence of Colored Paper on Printing," Bulletin No. 6, (July, 1968), pp. 13.

Fluorescent inks have recently been manufactured in a new form that can be used in lithographic as well as letterpress printing. These brilliant colors may now be printed on any form of advertisements or other works for 'eye-catching' effects.⁶¹ Figure 25 shows the Day-Glo ink colors made by Switzer Brothers, Incorporated of Cleveland, Ohio, the first company to manufacture fluorescent inks.

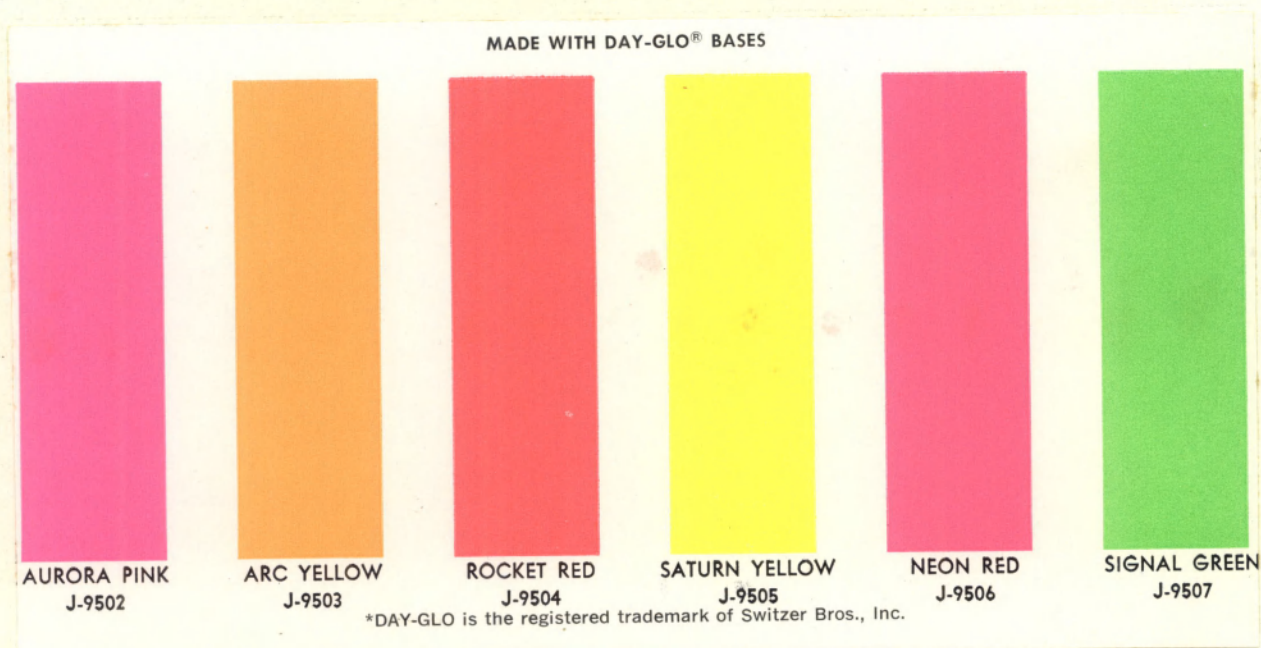


Fig. 25--Day-Glo ink colors

To achieve even greater variety fluorescent inks may be used in combination with conventional inks for "startling and unusual appeal."⁶² Figure 26 shows a portion of an advertisement in

⁶¹Kimberly-Clark Corporation, "Offset Lithography with Fluorescent Inks," Kimpressions, (Issue 4, 1965), p. 21.

⁶²Ibid., p. 21.

which both fluorescent and process inks were used. The designer has used fluorescent inks alone in some areas for emphasis; and in other parts of the design they are over-printed with process colors to produce a more subtle effect.

These are only two interesting kinds of inks from which the advertising artist may choose. Since he is often the one who selects the inks for jobs, it is important that he be aware of the different inks available.



Fig. 26--Fluorescent inks and process inks used in combination

Color-Key

Color-Key is the brand name for a presensitized polyester-based color-coated material made by Minnesota Mining and Manufacturing Company, St. Paul, Minnesota. It was introduced several years ago as a means of proofing color work in the lithographic industry. In order to see the results of a colored printing job before it is printed, the negatives for the various colors are placed over corresponding colored sheets of Color-Key. An exposure is made, using high intensity light. The Color-Key is developed, leaving the images adhered to the clear polyester backing. These sheets are then placed in register on top of one another over a sheet of the paper for the printed job. This allows the artist, printer, and customer to see how the final printed job will appear.⁶³ Color-Key has been utilized for this purpose in the experiments done in Chapter III of this study.

In addition to color proofing, Color-Key has many other uses. It can be used by the artist in rendering comprehensives of jobs, for color overlays on maps or charts, and for package designs. Figure 27 illustrates these uses of Color-Key. Color-Key is available in ten colors: black, opaque white, and transparent and opaque yellow, magenta, and cyan (the process colors), orange, red, dark blue, green, and brown.

⁶³Minnesota Mining and Manufacturing Company, "100 Things 3M Color-Key Can Do For You," advertisement folder.



Fig. 27--Art uses of Color-Key

The artist must make his original artwork with the colors separated on overlays and have it photographed by the printer or engraver. Then, from these negatives the Color-Key sheets are made. Although it is an expensive means of rendering proofs and comprehensives where multiple proofs are desired it is less expensive than printing press proof sheets on paper. Since the Color-Key proof is a very accurate representation of the colors as well as the artwork itself, costly errors and changes on jobs may often be avoided through its use.⁶⁴ Thus, Color-Key, whether used alone as art or as a means of proofing, is a very useful material for the advertising artist.

⁶⁴Minnesota Mining and Manufacturing Company, "100 Things 3M Color-Key Can Do for You," advertisement folder.

Moiré Screen Pattern

Harper's Dictionary of the Graphic Arts defines the term moiré as "the undesirable pattern formed by conflict between halftone screen and lines or dots on copy. . . ." ⁶⁵ In another book it is referred to as an "unsightly pattern frequently occurring when halftone negatives are made from halftone proofs." ⁶⁶ The truth of these statements can be seen in Figure 28, which was made to illustrate this effect.

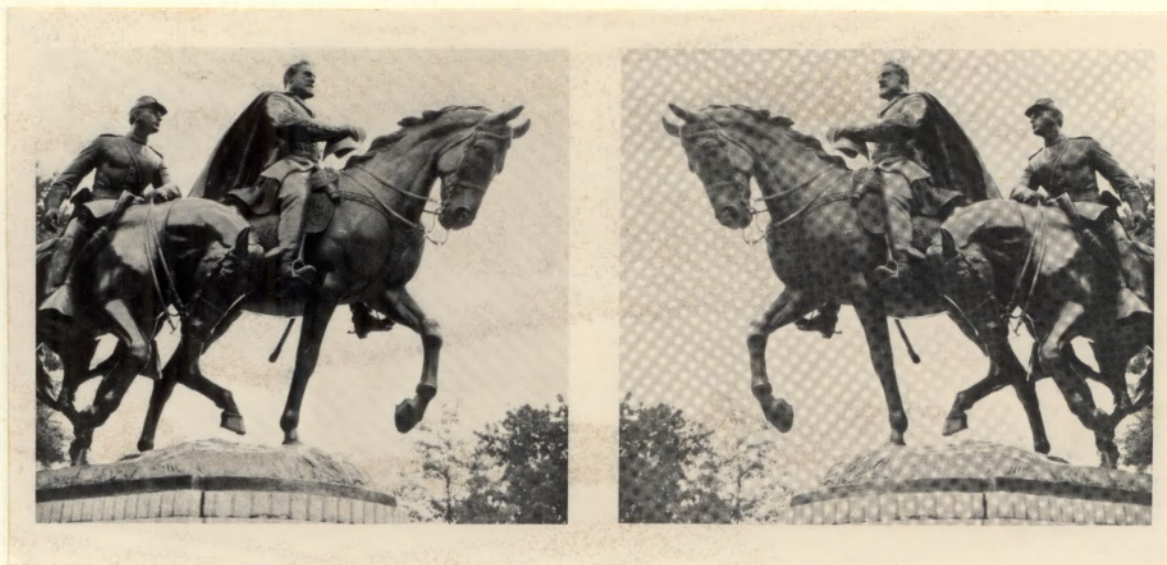


Fig. 28--Moiré on a halftone

While the moiré pattern effects are usually undesirable in the reproduction of pictures, it is possible for them to be used for a wide variety of pattern designs. Using screens

⁶⁵Edward M. Allen, Harper's Dictionary of the Graphic Arts (New York, 1963).

⁶⁶J. S. Mertle and G. L. Monsen, Photomechanics and Printing (Chicago, 1957), p. 103.

of the various screenline patterns placed on top of each other at different angles, many interesting patterns result. Figure 29 shows some of the different moiré effects.

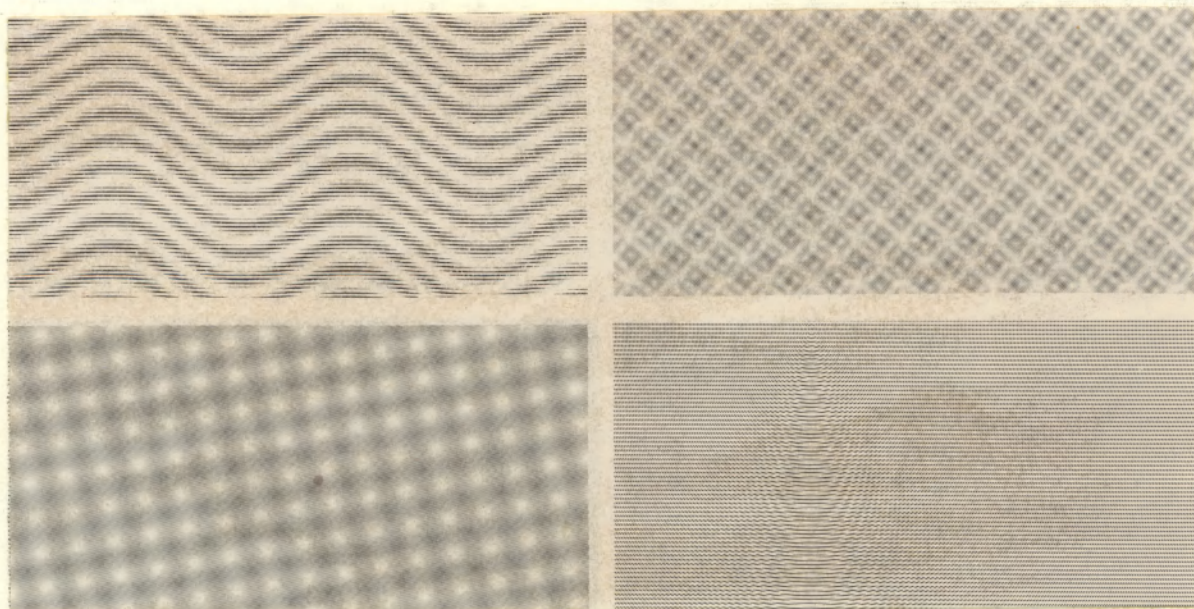


Fig. 29--Moiré effects

Some of these effects could be made by the artist with screenline screens that are pre-printed on self adhesive cellophane sheets. By varying the angles at which the two screens are placed on top of each other, an almost endless variety of patterns may be made. These patterns vary still more with different line count screens used together. Figure 43 in the experimental section of this study utilizes the moiré pattern obtained when a straight-line and a spiral screen are used. If the artist does not wish to make the moiré with cellophane screens, he can work closely with a printer or engraver in obtaining such patterns with photographic film screens.

CHAPTER III

EXPERIMENTAL USES OF MATERIALS AND PROCEDURES STUDIED

The graphic arts materials and procedures selected for this study are only a few of the outstanding ones available to the advertising artist through the graphic arts. Some of them provide shorter and easier methods for the artist to achieve unique effects and designs. However, these are not meant to be substitutes for original artwork. It is believed that these new media and methods may be used to stimulate the creation of designs that are new in idea as well as technique.

This chapter is made up of original experimental designs using commercial graphic arts materials and procedures alone and in combination to illustrate some of their creative uses. The production notes for each experiment, including the original photograph, are given with a Color-Key proof of the finished design.

Production Notes for Experiment I



Fig. 30--Original photograph for experiment I

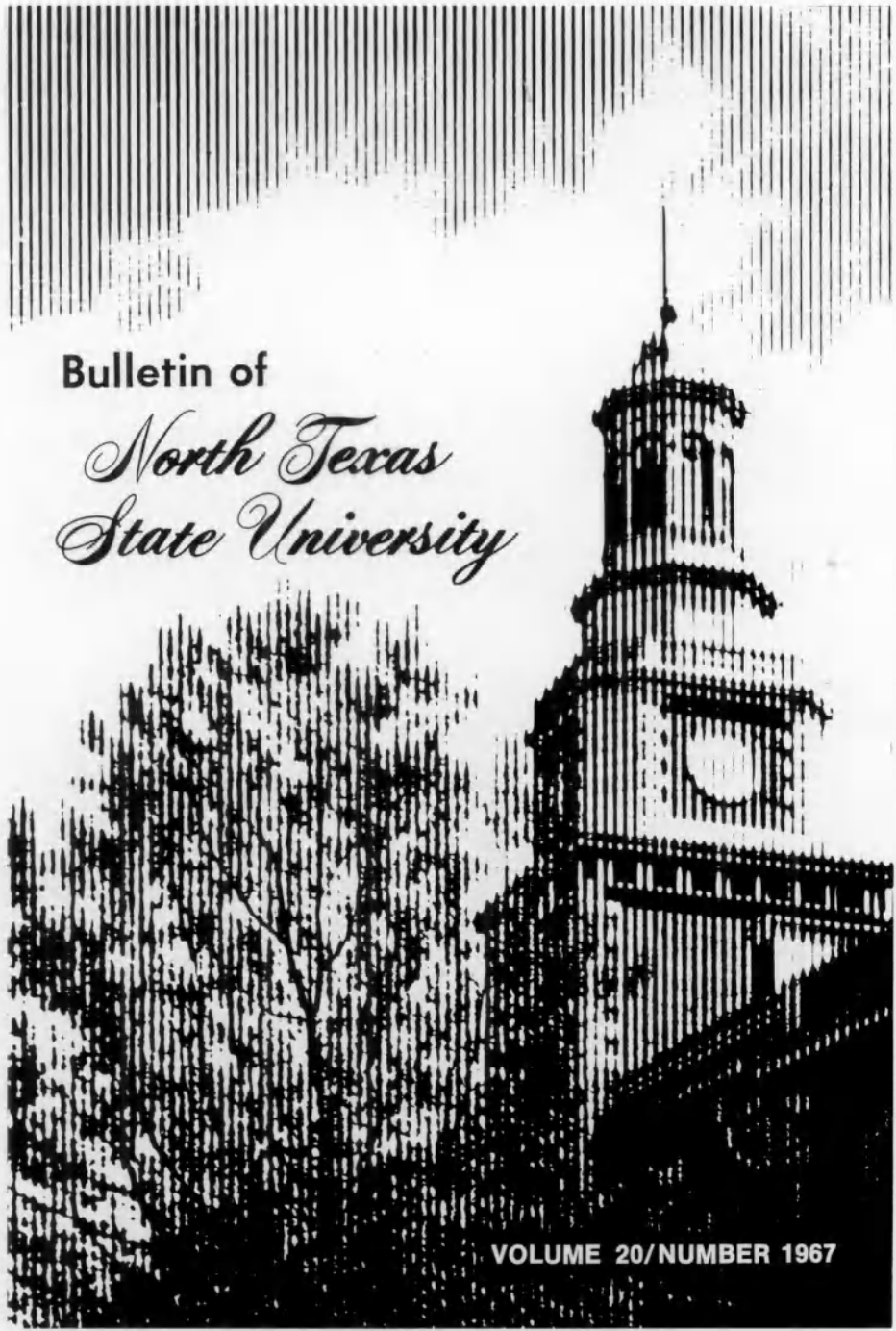
The original photograph was rephotographed at a 250 per cent enlargement using a straight-line screen of 20 lines per inch to make a duotone:

The black negative was vertically screened with high contrast.

The green negative was horizontally screened with less contrast.

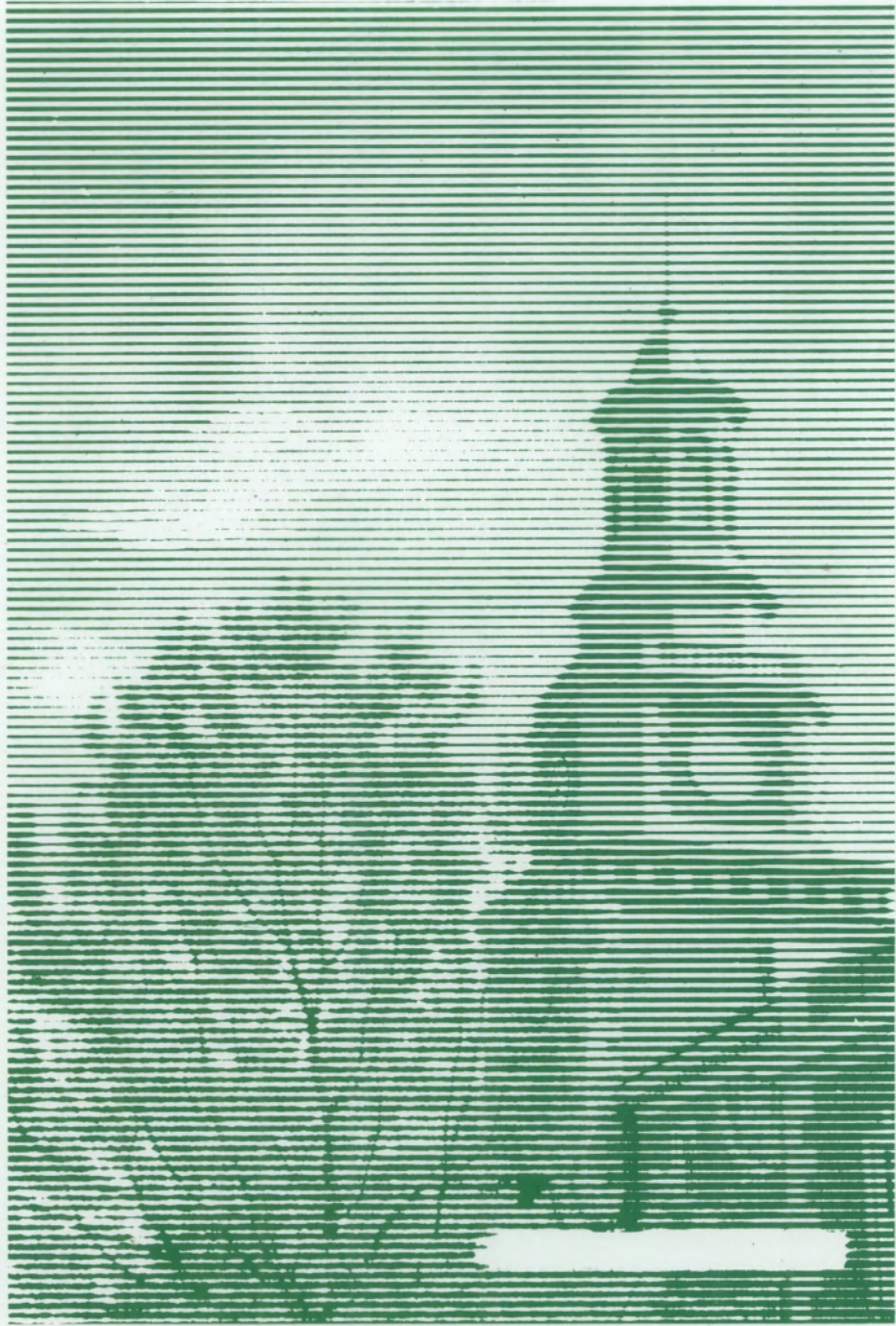
The final design was made by adding the lettering, which was positioned on a proof of the duotone and then photographed to print with the black negative of the duotone.

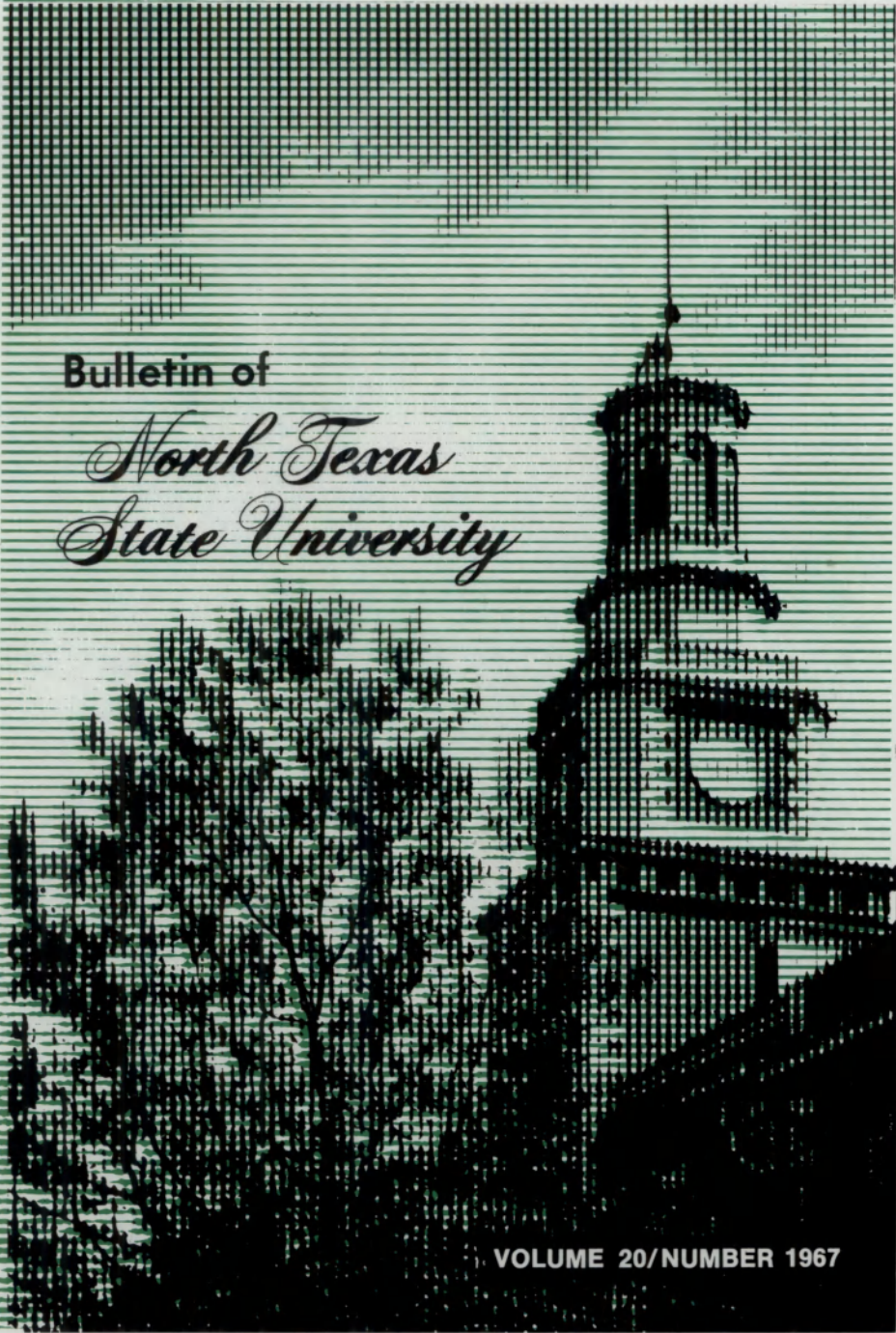
Figure 31 is the finished design.



Bulletin of
North Texas
State University

VOLUME 20/NUMBER 1967





Bulletin of

*North Texas
State University*

VOLUME 20/NUMBER 1967

Fig. 31--Finished design of experiment I

Production Notes for Experiment II

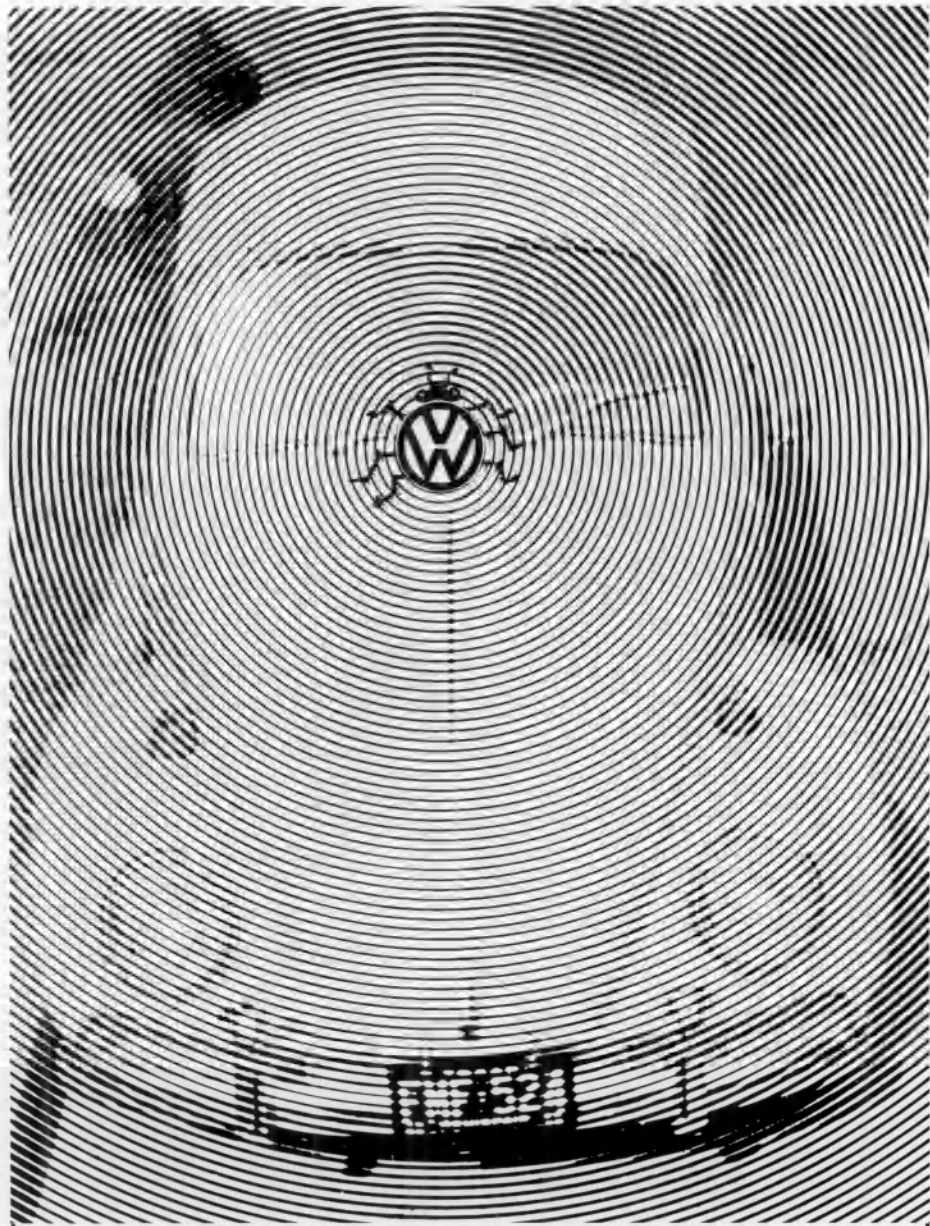


Fig. 32--Original photograph for experiment II

The original photograph was rephotographed at a 250 per cent enlargement using a spiral screen of 20 lines per inch. A print was made of this enlargement and the artwork and lettering were done on the print.

An overlay was made for the color, and the final design was photographed for reproduction with the overlay printing in orange.

Figure 33 is the finished design.



THE BUG



BUG



THE BUG

Fig. 33--Finished design of experiment II

Production Notes for Experiment III



Fig. 34--Original photograph for experiment III

The original photograph was rephotographed at a 250 per cent enlargement as a line conversion. A positive and a negative print were made of the enlargement, and the artwork was composed of sections of these prints:

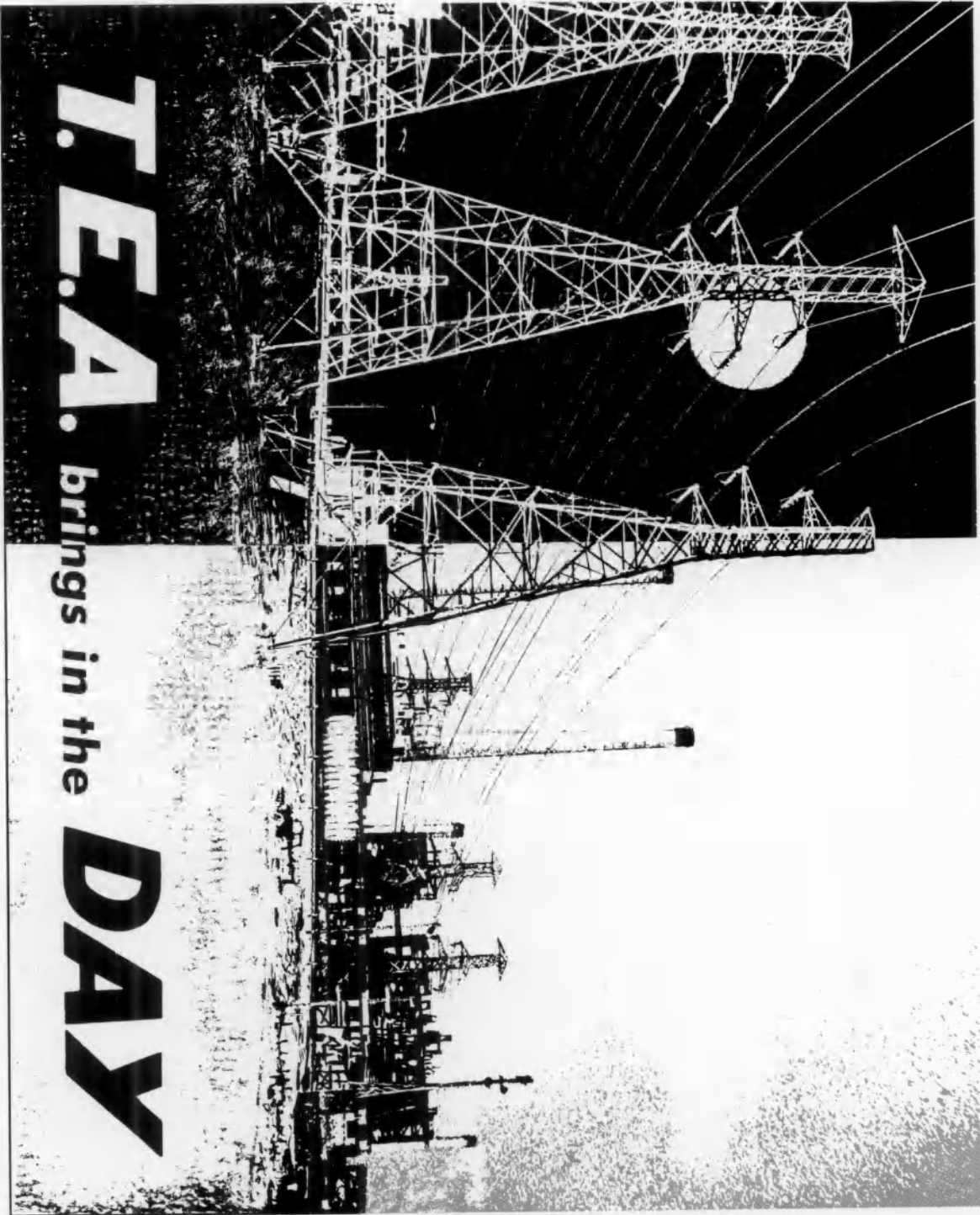
The left side was a negative print with a positive circle for the moon.

The right side was a positive print.

Negative and positive sets of lettering were also used.

An overlay was made for the color, and the final design was photographed for reproduction with the overlay printing in yellow.

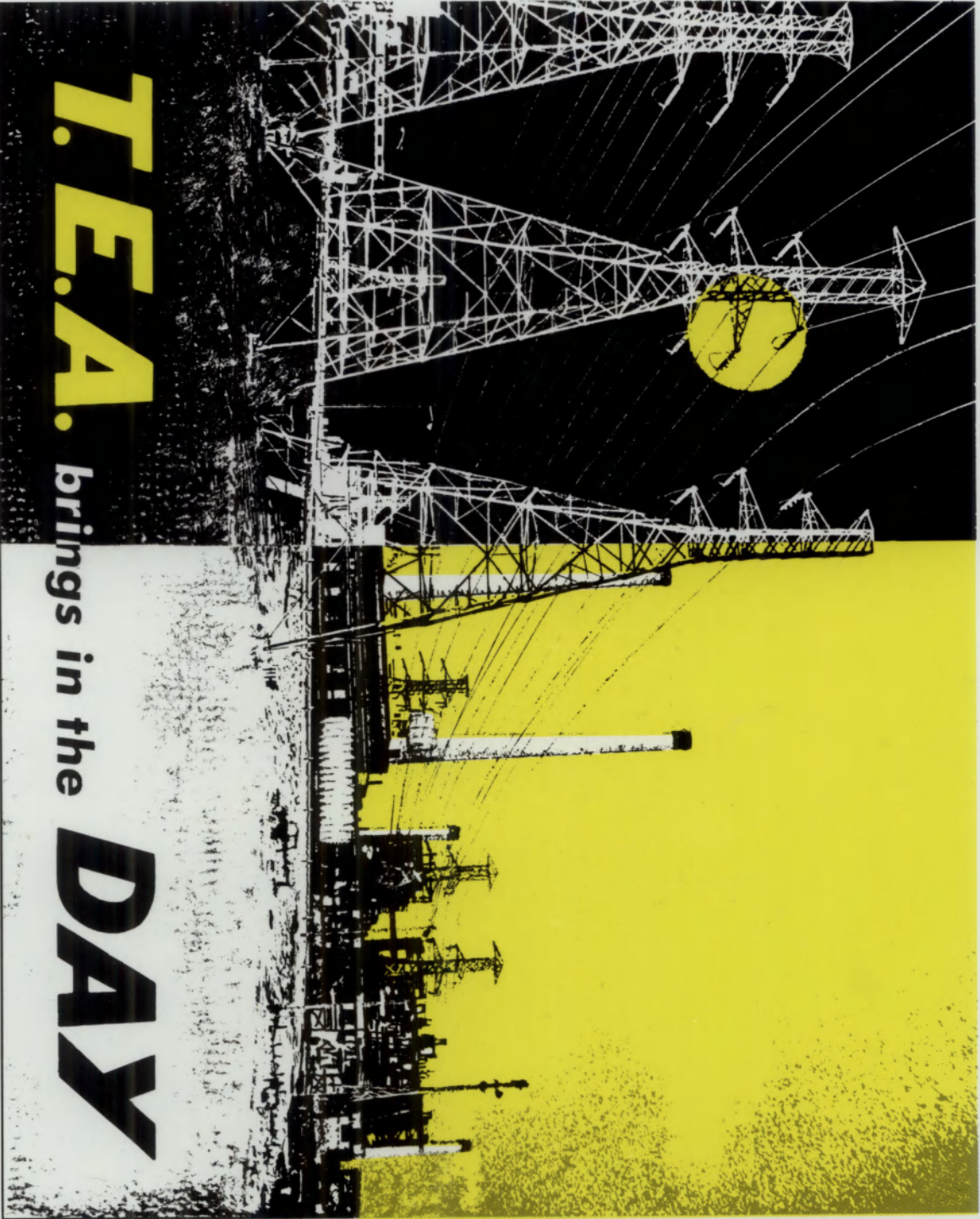
Figure 35 is the finished design.



T.E.A. brings in the **DAY**

T.E.A.





T.E.A. brings in the **DAY**

Fig. 35--Finished design of experiment III

Production Notes for Experiment IV



Fig. 36--Original photograph for experiment IV

The original photograph was rephotographed at a 250 per cent enlargement and converted into a line drawing. A negative print was made of this enlargement. Figure 14 on page 30 is a positive print of the same subject.

The lettering was set on a Photo Typositor with a mezzotint screen used on the word "inn". This was then pasted up on the negative print of the enlargement, and retouching was done with black and white paints.

The final design was photographed for reproduction in one color, dark blue.

Figure 37 is the finished design.



Fig. 37--Finished design of experiment IV

Production Notes for Experiment V



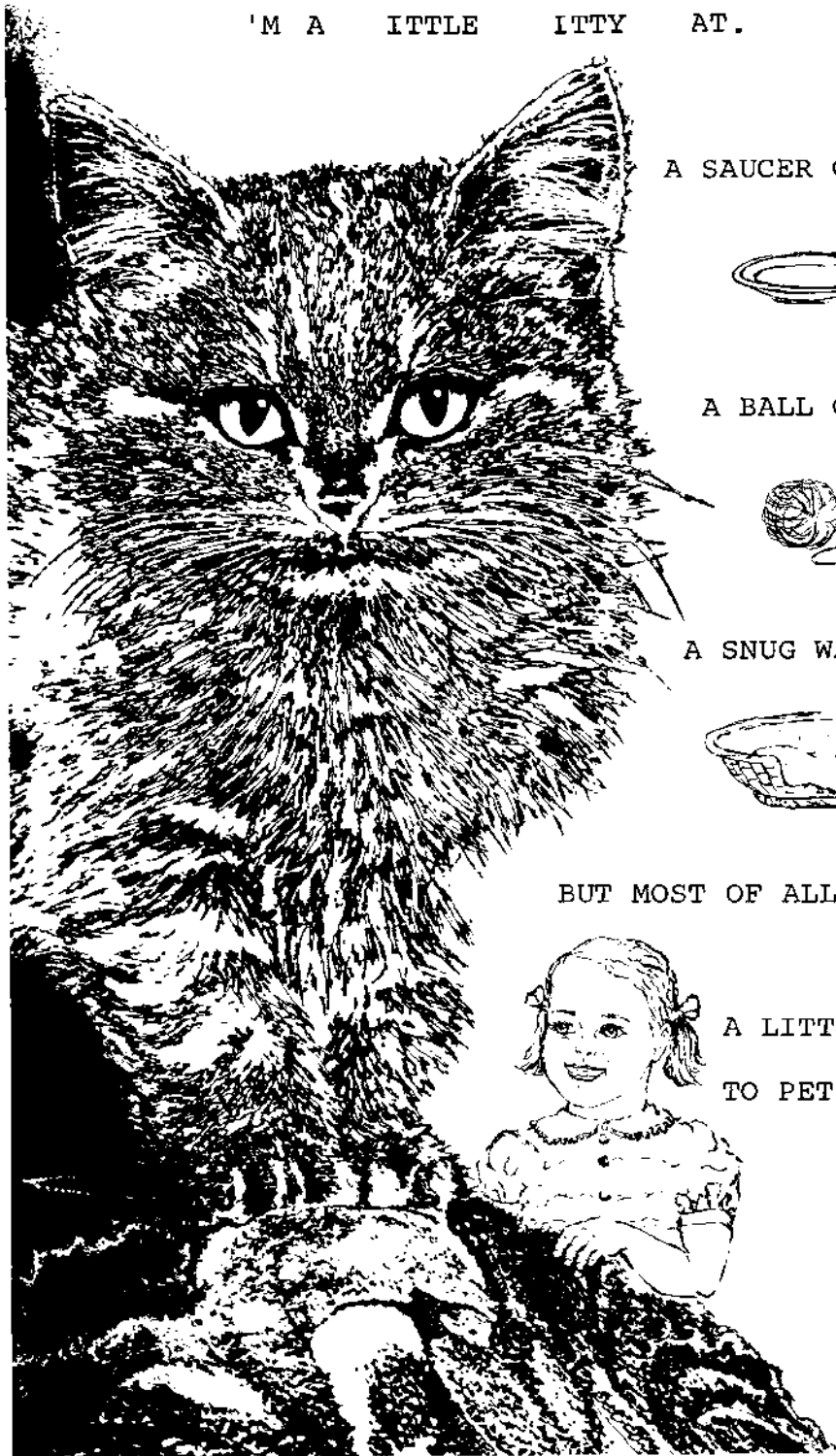
Fig. 38--Original photograph for experiment V

The original photograph was rephotographed at 280 per cent enlargement and converted into a line drawing. A positive print was made of this enlargement, changing the direction of the subject by "flopping" the negative.

Some retouching in black was done to the figure, and the unwanted background was painted out with white. The black lettering and the small drawings were pasted on the print of the enlargement. The lettering to be printed in color was pasted up on an overlay made for all of the color.

The final design was photographed for reproduction using varying percentages of screen for the overlay printed in blue.

Figure 39 is the finished design.



'M A LITTLE KITTY CAT. LIKE

A SAUCER OF MILK,



A BALL OF YARN,



A SNUG WARM BED,



BUT MOST OF ALL I LIKE

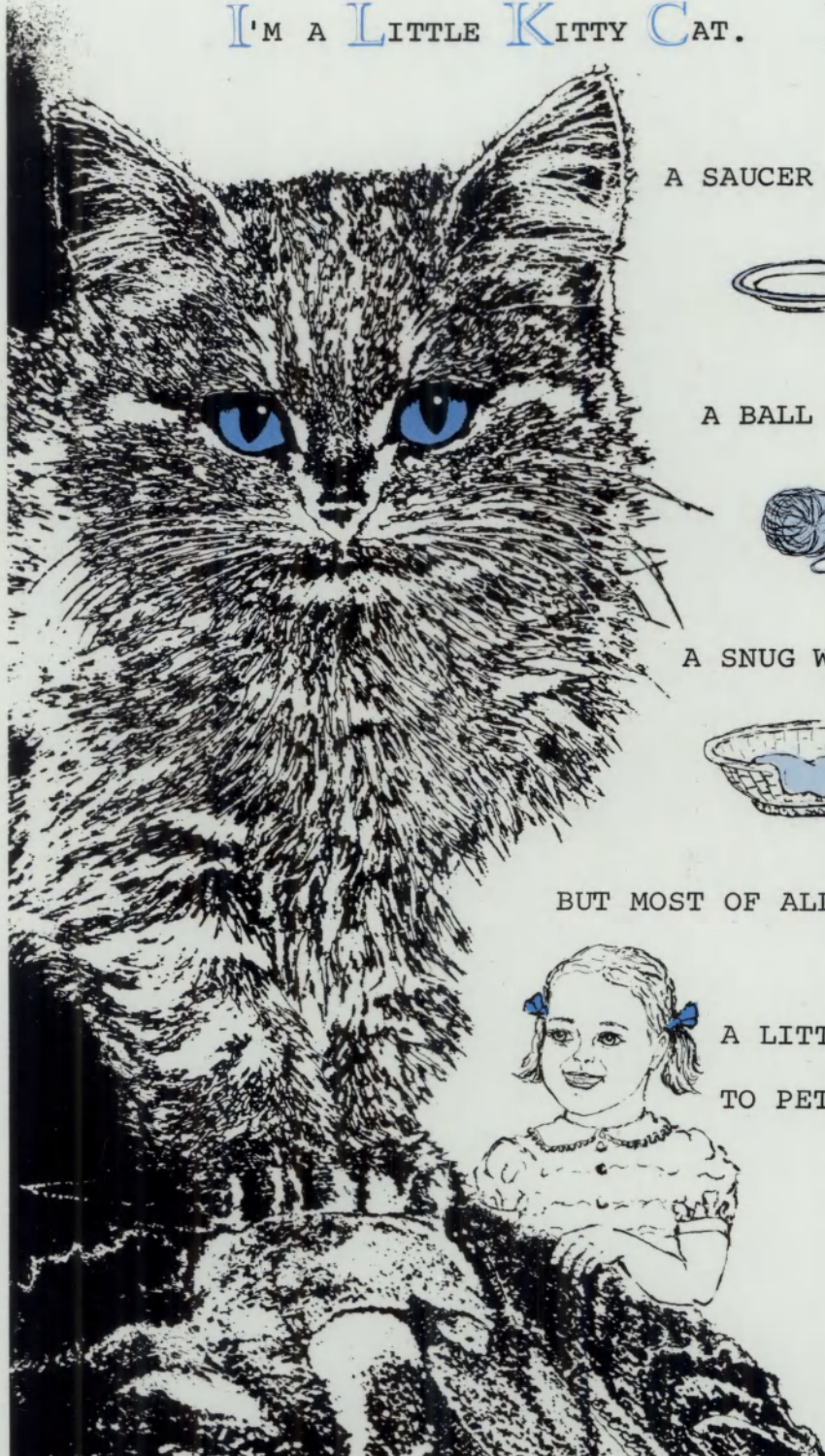
A LITTLE GIRL
TO PET ME.



I L K C I



I'M A LITTLE KITTY CAT. I LIKE



A SAUCER OF MILK,



A BALL OF YARN,



A SNUG WARM BED,



BUT MOST OF ALL I LIKE

A LITTLE GIRL
TO PET ME.



Fig. 39--Finished design of experiment V

Production Notes for Experiment VI



Fig. 40--Original photograph for experiment VI

The original photograph was rephotographed at a 250 per cent enlargement to make a duotone:

The black negative was a tone-line conversion with high contrast.

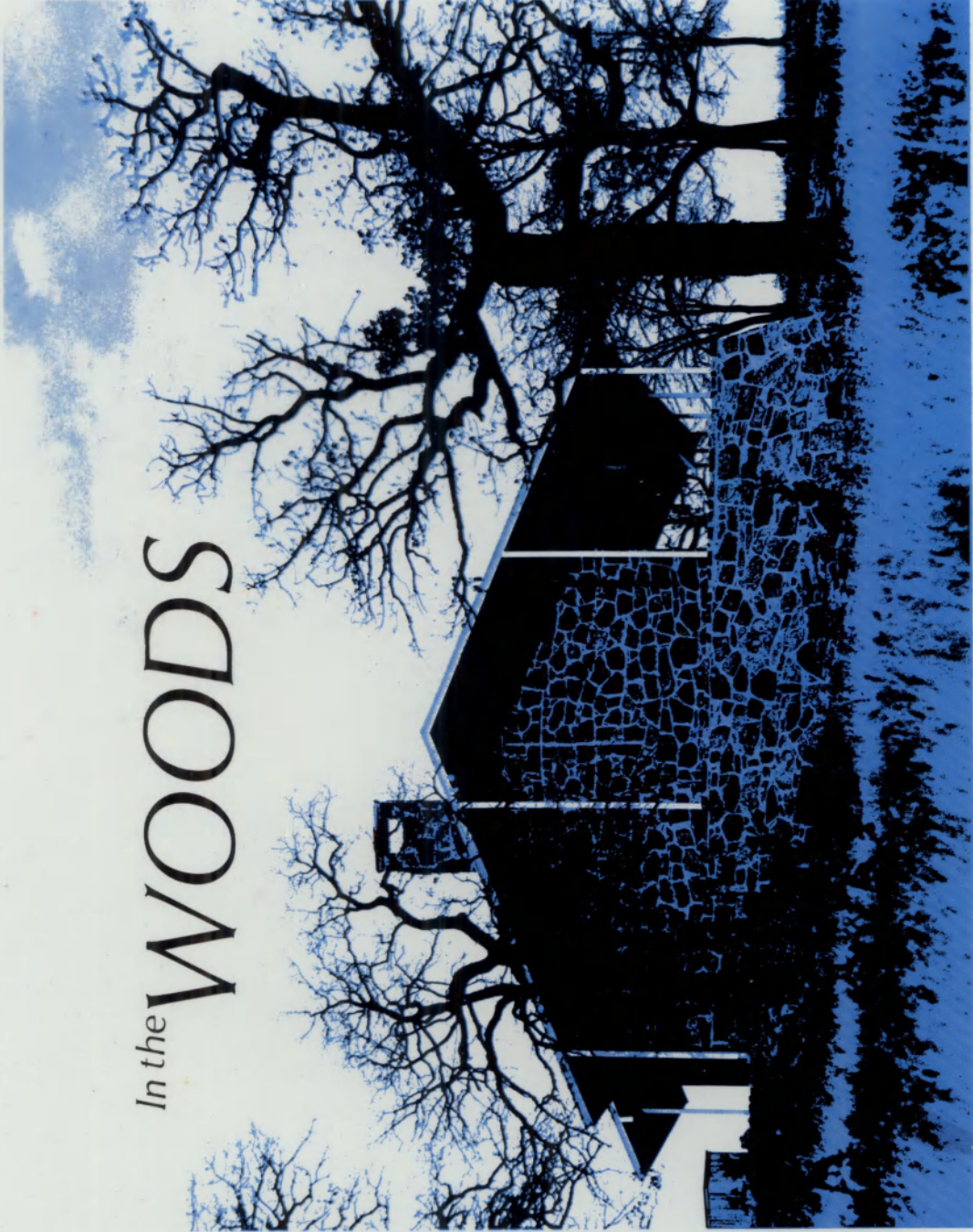
The blue negative was done by posterization with a forty per cent screen middle tone.

The lettering was positioned on a proof of the duotone and photographed to print in black.

Process blue ink was used to print the blue negative, and the paper used was Ticonderoga text, mandarin in color.

Figure 41 is the finished design.

In the **WOODS**



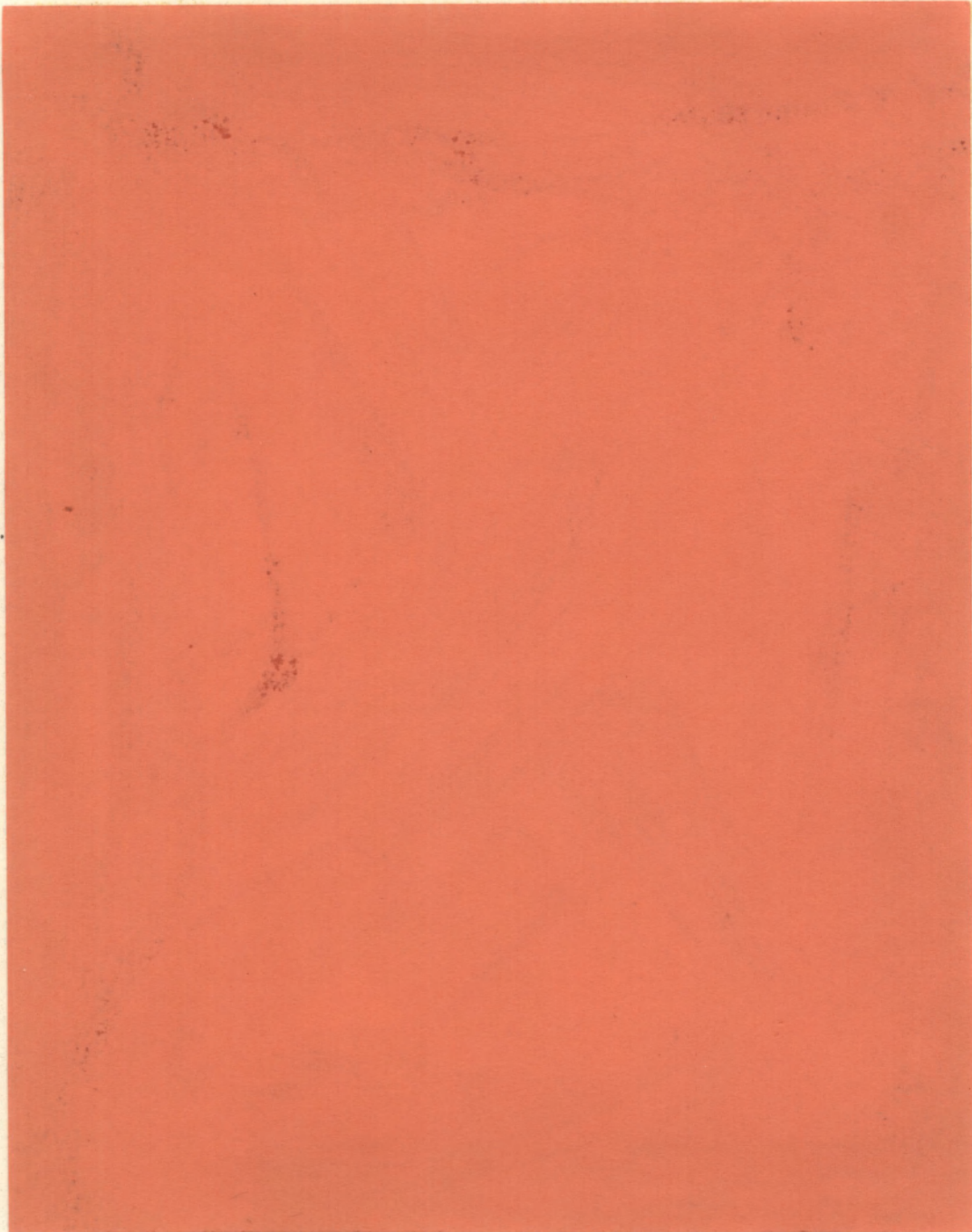


Fig. 41--Finished design of experiment VI

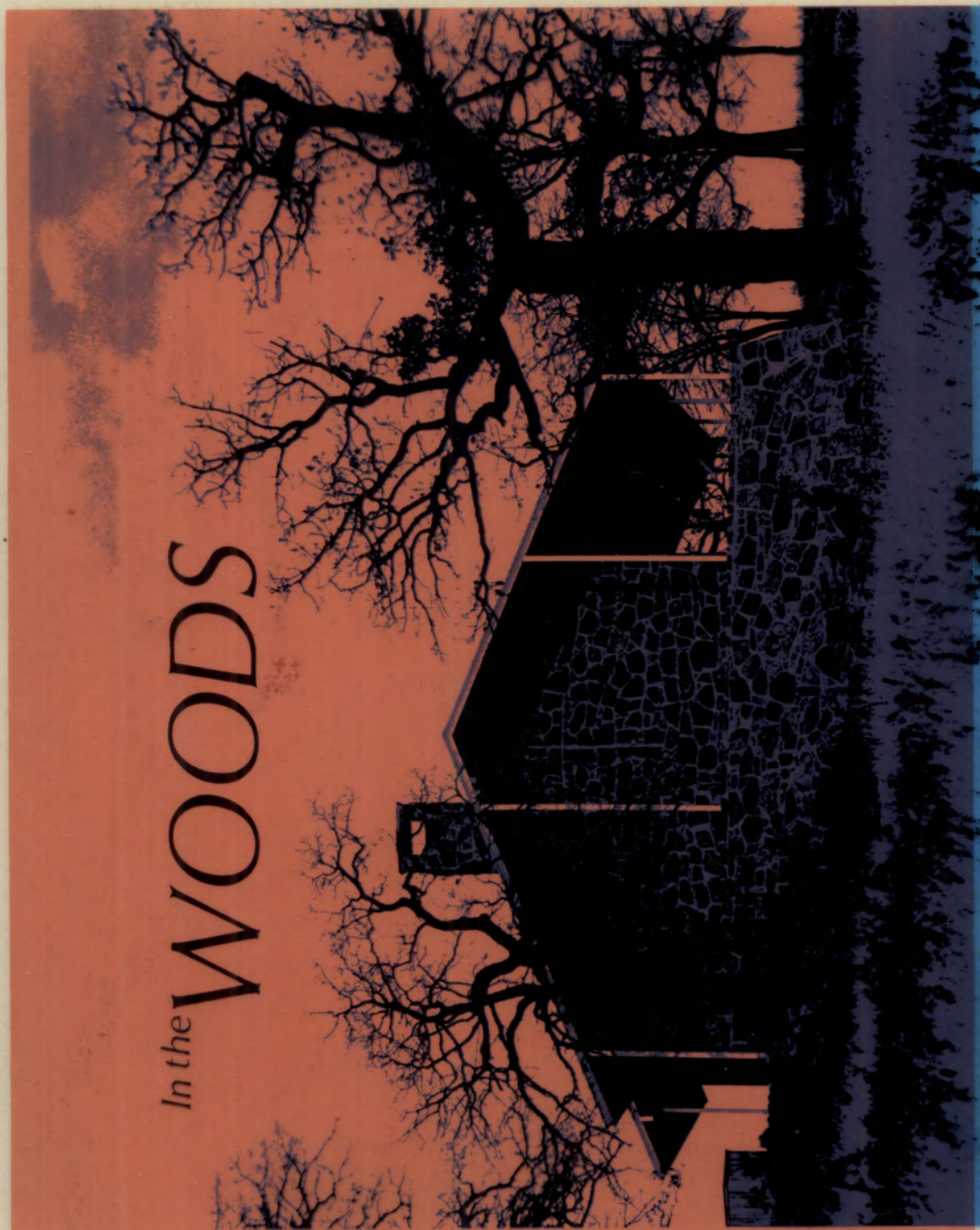


Fig. 41--Finished design of experiment VI

Production Notes for Experiment VII



Fig. 42--Original photograph for experiment VII

The original photograph was rephotographed at a 235 per cent enlargement with a straightline screen of thirteen lines per inch. A print was made of this enlargement and the black rectangle with reverse lettering was added to the print.

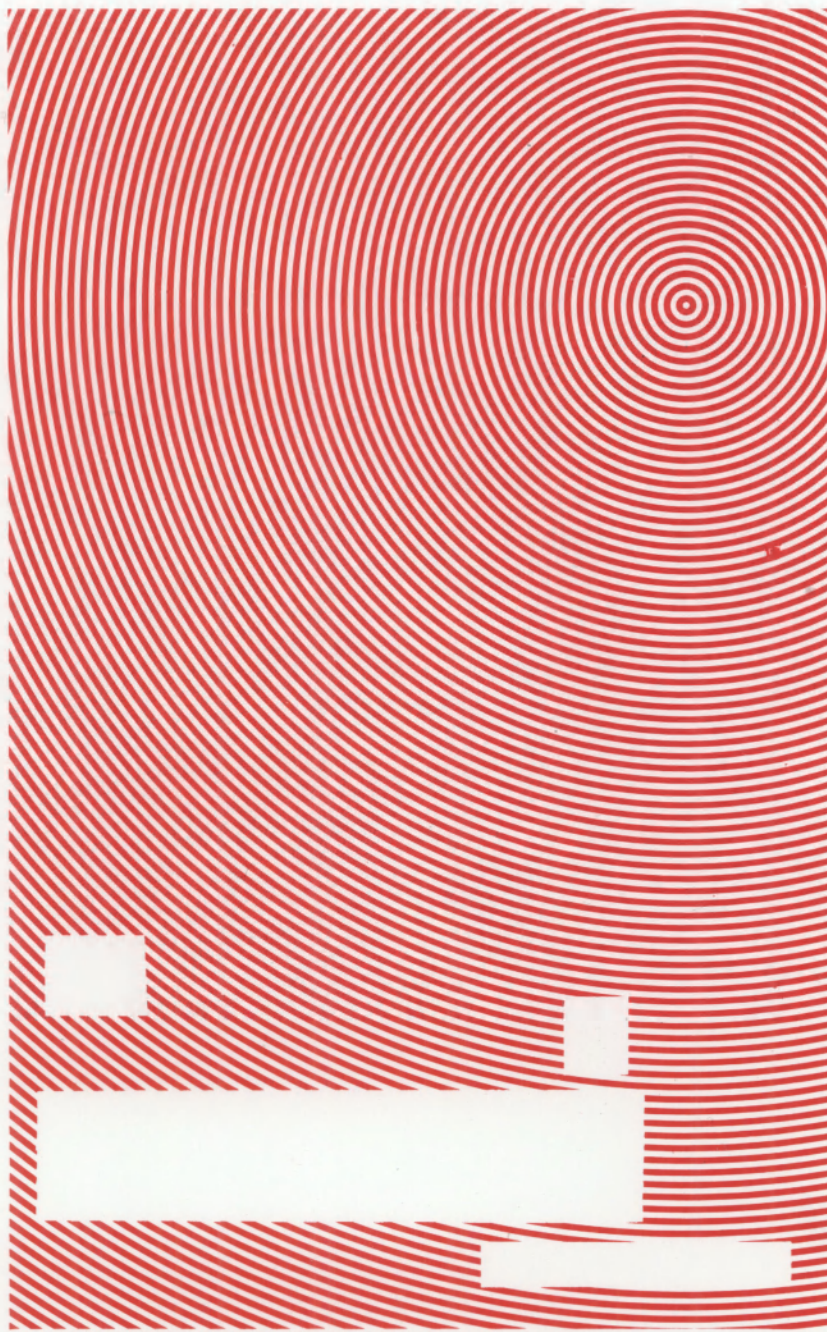
A pre-printed spiral screen pattern of sixteen lines per inch on self adhesive cellophane was positioned on an overlay of the print until the desired moiré pattern was obtained between the two screens. The spiral screen pattern was removed from over all the reverse type on the print except the word "sound". The final design was photographed for reproduction with the spiral screen overlay printing in red.

Figure 43 is the finished design.



the sound of
BATTLE

JON SMITH





the **sound** of
BATTLE

JON SMITH

Fig. 43--Finished design of experiment VII

CHAPTER IV

A STUDY OF COLLEGE AND UNIVERSITY ADVERTISING ART PRIGRAMS

As a means of determining the extent to which training in commercial graphic arts materials and procedures is a part of present college and university advertising art programs, a study was made of the bulletins from ninety-six of the one hundred and four American colleges and universities that offer degrees in advertising art. The American Art Directory, and The College Blue Book, were used as references.

The data compiled from this study included the following: (1) the name and location of the college or university, (2) the degree and major offered, (3) the number of hours in art courses, (4) the number of hours in advertising art courses, and (5) the number of hours in courses both within and outside the art department which placed some emphasis on commercial graphic arts materials and procedures. This information is contained in full in the Appendix and in statistical form in Table I.

It is evident in Table I that there is a considerable variation in the number of hours of courses included in advertising art programs. The number of hours in art courses including commercial graphic arts training varies from as many as thirty-six hours to as few as three hours, but courses containing at least some commercial graphic arts training

TABLE I
 COURSES AND NUMBER OF HOURS IN THE COLLEGE AND
 UNIVERSITY ADVERTISING ART PROGRAMS STUDIED

Courses in the Advertising Art Programs	Number of Hours		
	Highest	Average	Lowest
Art Courses	151	87.08	24
Art Courses Specifically in Advertising Art	96	21.40	4
Art Courses Including Commercial Graphic Arts Training	36	16.12	3
Courses Outside of the Art Departments Including Commercial Graphic Arts Training	16	1.57	0
Total Art Courses and Others Including Commercial Graphic Arts Training	46	17.82	4

are indicated as a part of every advertising art program studied. The average number of hours in courses including commercial graphic arts materials and procedures is almost eighteen hours, which represents twenty per cent of the average number of hours in art courses included in college and university advertising art programs.

Typography was the most mentioned graphic arts procedure included in the programs. Eighty-three of the programs indicated that training was given in type selection and composition with type, and the other twelve programs had lettering courses which may or may not introduce typography along with hand lettering.

Courses in photography were a part of fifty-two of the programs studied. In forty of these programs they were art courses, while in the other twelve they were separate courses outside the art department. The number of required hours in photography varied from one to fifteen hours in these programs. Although the emphasis appeared to be on conventional photography, with the photographic equipment necessary for such courses some of the new graphic photo techniques could be presented.

Twenty-four of the programs studied contained courses outside the art department which included training in commercial graphic arts. Ten of these listed industrial graphic arts as a course. This figure seemed surprisingly small since the majority of the colleges and universities studied had industrial arts departments as well as art departments.

Field trips to commercial graphic arts businesses were indicated as a part of fifteen of the advertising art programs. This number, too, appeared small since there are cities near most of the colleges and universities large enough to have some graphic arts facilities which could be visited.

Training in commercial graphic arts materials and procedures, then, makes up one fifth of the average college and university advertising art program. Since the average number of hours in art courses in the programs is eighty-seven, this makes seventeen hours in courses that contain training in graphic arts materials and procedures.

CHAPTER V

SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

Summary

The purpose of this thesis was to study some of the recent commercial graphic arts materials and procedures for application in college and university advertising art programs. Those graphic arts materials and procedures chosen for the study were discussed and explained with samples of the materials and examples of the procedures, and experiments were made to show creative uses of them. A study of college and university advertising art programs was then made, and the results were given. The following section deals with the application of commercial graphic arts materials and procedures to college and university advertising art programs.

Recommendations

Much of the information on current commercial graphic arts materials and procedures is available only through trade magazines and bulletins from graphic arts companies. Samples of new materials and works produced by new procedures are also released through many graphic arts businesses. Much of this information could be obtained for the college or university art department by subscribing to graphic arts trade magazines and by requesting to be put on the mailing lists of companies which offer free bulletins and samples.

The majority of the colleges and universities studied had industrial graphic arts departments as well as art departments. The industrial graphic arts departments should contain at least some of the equipment necessary to demonstrate new graphic arts materials and processes. Only ten of the colleges and universities studied had courses in the industrial graphic arts department as a part of their advertising art program. North Texas State University, Denton, Texas, was one of these ten. In the three-hour industrial arts course which is a part of their advertising art program the fundamentals of hand-set type composition, hand-press operation, bookbinding, block printing, silk-screen printing, and other selected reproduction processes are taught in a combined lecture and laboratory course.¹ Thus, courses in industrial graphic arts are another way by which those who plan advertising art programs could include commercial graphic arts materials and procedures.

Some of the materials and procedures discussed in this study could be handled with a minimum of additional equipment within the art department. As was mentioned earlier, those programs in which photography is taught would be able to use the same equipment to demonstrate and experiment with some of the new graphic photo techniques. Color-Key, a relatively new graphic arts material discussed in Chapter II, requires very

¹North Texas State University, Bulletin, Number 386, (Denton, Texas, June, 1967), p. 260.

little equipment for its use. There is no need for a dark room or a camera, since the Color-Key is sensitive only to strong ultraviolet light and can be handled and developed in ordinary room light. It can be printed by means of direct contact to artwork done on light-weight paper, or with negatives which could be obtained from other sources outside the art department. Therefore, the only equipment necessary for introducing the use of Color-Key into an advertising art program would be a sun lamp, or some other source of abundant ultraviolet light, and a contact frame which could be simply a sheet of glass pressed over the material on a flat surface. However, a standard photographic contact-printing frame would give the best results, since a tight even pressure could be maintained.²

Well planned field trips to commercial graphic arts businesses could be most helpful in introducing students to new graphic arts materials and procedures. Eugene M. Ettenberg, a professor at Pratt Institute, Brooklyn, New York, and co-author of the book How to Prepare Artwork for Letterpress and for Lithography, recommends that artists visit engraving and printing businesses in order to follow their artwork through the processes of reproduction. According to Ettenberg,

²Minnesota Mining and Manufacturing Co., "New 3M brand Color-Key," Saint Paul Minnesota, 1968, advertising folder on uses of Color-Key, p. 29.

such visits assist the artist in learning graphic terminology and in understanding what instructions to include on artwork.³ Much could also be learned about the fundamentals of printing processes and graphic arts materials from these field trips.

Programs in which professional artists and persons from the commercial graphic arts areas visit art departments to speak and present examples of their products could be beneficial also. An example of this type of program is the "Project Series" organized by the Advertising Artists Association of Dallas, Texas and the Dallas/Fort Worth Art Directors Club. Such programs may provide an opportunity for students to learn about and observe any new ideas, materials, and procedures in use by professionals, as well as give them an insight into their chosen profession of advertising art.

A subject for further study would be at what levels to include training in current commercial graphic arts materials and procedures in college and university advertising art programs. While training in some could begin early in the programs, perhaps others, such as the use of photocomposed-type, should be introduced after the student had taken courses in hand lettering and type selection. With this basic background he would be better able to judge spacing and to select type styles for this easier method of typography.

³Eugene M. Ettenberg and Ralph E. Eckerstrom, How to Prepare Artwork for Letterpress and for Lithography, (Neenah, Wisconsin, 1965), p. 1.

Conclusions

The field of advertising art is primarily concerned with creating advertisements which communicate to the public, and the prime means by which this communication is carried out is through the graphic arts. The graphic arts have progressed very rapidly, and the progress proposed for the future appears even more rapid. It has been shown that a knowledge of graphic arts materials and procedures is considered essential for an advertising artist to prepare artwork properly, and that such knowledge may also stimulate new ideas and creativity. Training in commercial graphic arts materials and procedures was found to comprise one-fifth of the average college and university advertising art program.

Therefore, training in the current commercial graphic arts materials and procedures should be included in all college and university advertising art programs. Graduates from programs including this training would not only be more fully prepared for their professions in advertising art, but also could better understand and respect those who work with them in the graphic arts. Such an understanding would result in a smoother working relationship and a higher quality of work in the graphic arts communication media.

APPENDIX

INFORMATION ON THE COLLEGE AND UNIVERSITY

ADVERTISING ART PROGRAMS STUDIED

ALABAMA

University of Alabama, Tuscaloosa

Bachelor of Fine Arts, field of specialization in commercial art:

88 hours in art courses including 12 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

ARIZONA

Arizona State University, Tempe

Bachelor of Fine Arts, area of specialization in commercial art:

76 hours in art courses including 21 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Arizona, Tucson

Bachelor of Fine Arts, major in commercial design:

84 hours in art courses including 15 hours in advertising art.

A total of 12 hours of art courses include commercial graphic arts materials and procedures as a part.

ARKANSAS

Arkansas Agricultural, Mechanical, and Normal College, Pine Bluff

Bachelor of Art, in commercial art:

59 hours in art courses including 22 hours in advertising art.

A total of 16 hours of art courses include commercial graphic arts materials and procedures as a part.

Arkansas Polytechnic College, Russellville

Bachelor of Art, in commercial design:

40 hours in art courses including 32 hours in advertising art.

A total of 22 hours of art courses include commercial graphic arts materials and procedures as a part.

Ouachita Baptist University, Arkadelphia

Bachelor of Art, field of concentration in commercial art:

40 hours in art courses including 15 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

CALIFORNIA

Art Center of Design, Los Angeles

Bachelor of Fine Arts, in advertising design:

110 hours in art courses including 36 hours in advertising art.

Additional courses outside the art department include:

4 hours of photography, and 8 hours of graphic design

A total of 30 hours of art courses and 14 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

California Institute of the Arts, Los Angeles

Bachelor of Fine Arts, major in advertising design:

95 hours in art courses including 62 hours in advertising art.

A total of 34 hours of art courses include commercial graphic arts materials and procedures as a part.

California State College at Los Angeles, Los Angeles

Bachelor of Art, major in graphic design:

60 hours in art courses including 21 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

La Sierra College, Riverside

Bachelor of Science, major in commercial art:

44 hours in art courses including 12 hours in advertising art.

Additional courses outside the art department include:

3 hours of photography

A total of 6 hours of art courses and 3 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Pacific Union College, Angwin

Bachelor of Science, major in commercial art:

66 hours in art courses including 14 hours in advertising art.

A total of 16 hours of art courses include commercial graphic arts materials and procedures as a part.

San Jose State College, San Jose

Bachelor of Art, major in commercial art:

68 hours in art courses including 16 hours in advertising art.

Additional courses outside the art department include:

3 hours industrial graphic arts.

A total of 18 hours of art courses and 3 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

CALIFORNIA

Woodbury College, Los Angeles

Bachelor of Science in Professional Arts, commercial art:

90 hours in art courses including 32 hours in advertising art.

Additional courses outside the art department include

4 hours business advertising media research

A total of 21 hours of art courses and 4 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

COLORADO

Southern Colorado State College, Pueblo

Bachelor of Art, major graphic design:

67 hours in art courses including 21 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Denver, Denver

Bachelor of Fine Arts in advertising design:

110 hours in art courses including 25 hours in advertising art.

A total of 30 hours of art courses include commercial graphic arts materials and procedures as a part.

CONNECTICUT

University of Bridgeport, Bridgeport

Bachelor of Arts, major in graphic design:

47 hours in art courses including 28 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Hartford, Hartford

Bachelor of Fine Arts, major in advertising design:

68 hours in art courses including 19 hours in advertising art.

A total of 19 hours of art courses include commercial graphic arts materials and procedures as a part.

FLORIDA

Florida State University, Tallahassee

Bachelor of Fine Arts, major in commercial art:

51 hours in art courses including 18 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

Ringling School of Art,

Bachelor of Arts, in field of commercial art:

90 hours in art courses including 20 hours in advertising art.

A total of 30 hours of art courses include commercial graphic arts materials and procedures as a part.

FLORIDA

University of Florida, Gainesville

Bachelor of Design, field of advertising design:

77 hours in art courses including 24 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Miami, Coral Gables

Bachelor of Fine Arts, field of specialization in commercial art:

32 hours in art courses including 20 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

GEORGIA

Atlanta School of Art, Atlanta

Bachelor of Fine Arts, major in graphic design:

110 hours in art courses including 30 hours in advertising art.

A total of 25 hours of art courses include commercial graphic arts materials and procedures as a part.

Georgia State College, Atlanta

Bachelor of Fine Arts, major in commercial art:

100 hours in art courses including 20 hours in advertising art.

Additional courses outside the art department include:

10 hours photography.

A total of 15 hours of art courses and 10 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

University of Georgia, Athens

Bachelor of Arts, major in advertising design:

40 hours in art courses including 20 hours in advertising art.

Additional courses outside the art department include:

5 hours journalism.

A total of 20 hours of art courses and 5 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Wesleyan College, Macon

Bachelor of Fine Arts, concentration in commercial art:

68 hours in art courses including 12 hours in advertising art.

A total of 12 hours of art courses include commercial graphic arts materials and procedures as a part.

IDAHO

Boise College, Boise

Bachelor of Art, in commercial art:

70 hours in art courses including 10 hours in advertising art.

A total of 20 hours of art courses include commercial graphic arts materials and procedures as a part.

IDAHO

Idaho State University, Pocatello

Bachelor of Arts, major in commercial art:

50 hours in art courses including 12 hours in advertising art.

A total of 12 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Idaho, Moscow

Bachelor of Arts, major in commercial art:

50 hours in art courses including 14 hours in advertising art.

A total of 10 hours of art courses include commercial graphic arts materials and procedures as a part.

ILLINOIS

Bradley University, Peoria

Bachelor of Fine Arts, major in commercial art:

75 hours in art courses including 17 hours in advertising art.

A total of 11 hours of art courses include commercial graphic arts materials and procedures as a part.

Chicago Academy of Fine Arts, Chicago

Bachelor of Fine Arts, major in advertising art:

87 hours in art courses including 18 hours in advertising art.

Additional courses outside the art department include:

3 hours of photography.

A total of 12 hours of art courses and 3 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Illinois Institute of Technology, Chicago

Bachelor of Science, major in visual design:

73 hours in art courses including 55 hours in advertising art.

Additional courses outside the art department include:

11 hours of photography, 5 hours of graphic arts.

A total of 30 hours of art courses and 16 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

University of Illinois, Urbana

Bachelor of Arts, field of concentration in graphic design:

63 hours in art courses including 16 hours in advertising art.

Additional courses outside the art department include:

3 hours journalism, typography.

A total of 10 hours of art courses and 3 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Illinois Wesleyan University, Bloomington

Bachelor of Fine Arts, major in commercial art:

130 hours in art courses including 22 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

INDIANA

Ball State University, Muncie

Bachelor of Arts, major in advertising art:

78 hours in art courses including 16 hours in advertising art.

Additional courses outside the art department include:

4 hours of photography.

A total of 16 hours of art courses and 4 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Indiana State University, Terre Haute

Bachelor of Arts, major in commercial design:

A total of 7 hours of art courses include commercial graphic arts materials and procedures as a part.

Fort Wayne Art Institute,

Bachelor of Fine Arts, major in graphic design:

65 hours in art courses including 26 hours in advertising art.

A total of 26 hours of art courses include commercial graphic arts materials and procedures as a part.

Herron School of Art, Indiana University, Indianapolis

Bachelor of Fine Arts, major in visual communication:

60 hours in art courses including 31 hours in advertising art.

Additional courses outside the art department include:

6 hours photography.

A total of 18 hours of art courses and 6 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

IOWA

Drake University, Des Moines

Bachelor of Fine Arts, major in commercial art:

66 hours in art courses including 11 hours in advertising art.

A total of 8 hours of art courses include commercial graphic arts materials and procedures as a part.

KANSAS

Kansas State Teachers College, Emporia

Bachelor of Arts, major in commercial art:

60 hours in art courses including 10 hours in advertising art.

A total of 10 hours of art courses include commercial graphic arts materials and procedures as a part.

Sacred Heart College, Wichita

Bachelor of Arts, Emphasis: commercial art:

40 hours in art courses including 13 hours in advertising art.

Additional courses outside the art department include:

3 hours business, printed advertising

A total of 13 hours of art courses and 3 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

KANSAS

University of Kansas, Lawrence

Bachelor of Fine Arts, major in commercial art:

86 hours in art courses including 22 hours in advertising art.

Additional courses outside the art department include:

5 hours of journalism.

A total of 14 hours of art courses and 5 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Wichita State University, Wichita

Bachelor of Fine Arts, major in advertising design:

80 hours in art courses including 21 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

LOUISIANA

Louisiana College, Pineville

Bachelor of Fine Arts in advertising art:

78 hours in art courses including 24 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

Louisiana Polytechnic Institute, Ruston

Bachelor of Arts, major in commercial art:

59 hours in art courses including 18 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

Northeastern Louisiana State College, Monroe

Bachelor of Arts, major in advertising design:

60 hours in art courses including 18 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

Northwestern State College of Louisiana, Natchitoches

Bachelor of Arts, major in commercial art:

60 hours in art courses including 18 hours in advertising art.

A total of 12 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Southwestern Louisiana, Lafayette

Bachelor of Arts, major in advertising design:

77 hours in art courses including 21 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

MASSACHUSETTS

Boston Museum of Fine Arts School Boston

Bachelor of Fine Arts, major in commercial art:

129 hours in art courses including 25 hours in advertising art.

A total of 25 hours of art courses include commercial graphic arts materials and procedures as a part.

Boston University, Boston

Bachelor of Fine Arts, major in advertising design:

83 hours in art courses including 21 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

MICHIGAN

Marygrove College, Detroit

Bachelor of Arts, major in advertising design:

32 hours in art courses including 14 hours in advertising art.

A total of 8 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Michigan, Ann Arbor

Bachelor of Science in Design, major in advertising design:

52 hours in art courses including 16 hours in advertising art.

A total of 14 hours of art courses include commercial graphic arts materials and procedures as a part.

MINNESOTA

Minneapolis School of Art, Minneapolis

Bachelor of Fine Arts, major in graphic design:

113 hours in art courses including 34 hours in advertising art.

A total of 34 hours of art courses include commercial graphic arts materials and procedures as a part.

MISSISSIPPI

Mississippi State College for Women, Columbus

Bachelor of Fine Arts, major in advertising art:

65 hours in art courses including 6 hours in advertising art.

A total of 6 hours of art courses include commercial graphic arts materials and procedures as a part.

MISSOURI

Central Missouri State College, Warrensburg

Bachelor of Science, major in commercial art:

50 hours in art courses including 12 hours in advertising art.

Additional courses outside the art department include:

3 hours of photography, 4 hours of industrial graphic arts.

A total of 8 hours of art courses and 7 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

MISSOURI

Kansas City Art Institute, Kansas City

Bachelor of Fine Arts, major in graphic design:

94 hours in art courses including 54 hours in advertising art.

A total of 30 hours of art courses include commercial graphic arts materials and procedures as a part.

Southwest Missouri State College, Girardeau

Bachelor of Arts, major in advertising design:

24 hours in art courses including 6 hours in advertising art.

A total of 4 hours of art courses include commercial graphic arts materials and procedures as a part.

Southwest Missouri, Springfield

Bachelor of Fine Arts, major in commercial art:

60 hours in art courses including 18 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

NEW MEXICO

Eastern New Mexico University, Portales

Bachelor of Arts, major in commercial art:

56 hours in art courses including 14 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Albuquerque, Albuquerque

Bachelor of Arts, major in commercial design:

43 hours in art courses including 9 hours in advertising art.

A total of 6 hours of art courses include commercial graphic arts materials and procedures as a part.

NEW YORK

Finch College, New York

Bachelor of Arts, major in commercial art:

57 hours in art courses including 16 hours in advertising art.

A total of 16 hours of art courses include commercial graphic arts materials and procedures as a part.

New York Institute of Technology, New York

Bachelor of Fine Arts, major in advertising design:

92 hours in art courses including 18 hours in advertising art.

A total of 14 hours of art courses include commercial graphic arts materials and procedures as a part.

NEW YORK

Pratt Institute, Brooklyn

Bachelor of Fine Arts, in advertising design:

118 hours in art courses including 96 hours in advertising art.

Additional courses outside the art department include:

4 hours of photography.

A total of 26 hours of art courses and 4 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Rochester Institute of Technology, Rochester

Bachelor of Fine Arts in Advertising Design:

151 hours in art courses including 39 hours in advertising art.

A total of 36 hours of art courses include commercial graphic arts materials and procedures as a part.

Syracuse University, New York

Bachelor of Arts, major in advertising design:

94 hours in art courses including 18 hours in advertising art.

Additional courses outside the art department include:

3 hours of journalism, 6 hours of industrial graphic arts.

A total of 18 hours of art courses and 9 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

NORTH CAROLINA

University of North Carolina at Greensboro, Greensboro

Bachelor of Fine Arts, in advertising design:

33 hours in art courses including 15 hours in advertising art.

A total of 12 hours of art courses include commercial graphic arts.

OHIO

Cleveland Institute of Art, Cleveland

Bachelor of Fine Arts, major in graphic design:

150 hours in art courses including 42 hours in advertising art.

A total of 36 hours of art courses include commercial graphic arts materials and procedures as a part.

Columbus College of Art and Design, Columbus

Bachelor of Arts, major in advertising design:

100 hours in art courses including 27 hours in advertising art.

A total of 30 hours of art courses include commercial graphic arts materials and procedures as a part.

Kent State University, Kent

Bachelor of Fine Arts, in advertising art:

80 hours in art courses including 16 hours in advertising art.

Additional courses outside the art department include:

5 hours industrial graphic arts technology.

A total of 16 hours of art courses and 5 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Ohio State University, Columbus

Bachelor of Fine Arts, major in visual communication design:

123 hours in art courses including 30 hours in advertising art.

Additional courses outside the art department include:

3 hours journalism, typography and printing, 3 hours photography.

A total of 25 hours of art courses and 6 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Ohio University, Athens

Bachelor of Fine Arts, specialization in advertising design:

57 hours in art courses including 20 hours in advertising art.

Additional courses outside the art department include:

3 hours of journalism

A total of 18 hours of art courses and 3 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

OKLAHOMA

Central State College, Edmond

Bachelor of Fine Arts, major in advertising design:

51 hours in art courses including 10 hours in advertising art.

Additional courses outside the art department include:

2 hours photography, 2 hours industrial arts, printing.

A total of 9 hours of art courses and 4 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Southwestern State College, Weatherford

Bachelor of Arts, major in commercial art:

60 hours in art courses including 14 hours in advertising art.

A total of 14 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Tulsa, Tulsa

Bachelor of Fine Arts, major in commercial art:

60 hours in art courses including 6 hours in advertising art.

Additional courses outside the art department include:

6 hours of journalism, advertising and copy layout.

A total of 3 hours of art courses and 6 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

PENNSYLVANIA

Beaver College, Jenkintown

Bachelor of Fine Arts, major in graphic design:

57 hours in art courses including 24 hours in advertising art.

A total of 20 hours of art courses include commercial graphic arts materials and procedures as a part.

Moore College of Art, Philadelphia

Bachelor of Fine Arts in Advertising Art:

91 hours in art courses including 30 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

Mount Mercy College,

Bachelor of Arts, major in graphic design:

38 hours in art courses including 4 hours in advertising art.

A total of 4 hours of art courses include commercial graphic arts materials and procedures as a part.

Philadelphia College of Art, Philadelphia

Bachelor of Fine Arts, major in graphic design:

90.5 hours in art courses including 42 hours in advertising art.

A total of 30 hours of art courses include commercial graphic arts materials and procedures as a part.

SOUTH CAROLINA

Coker College for Women, Hartsville

Bachelor of Arts, major in commercial art:

41 hours in art courses including 6 hours in advertising art.

A total of 6 hours of art courses include commercial graphic arts materials and procedures as a part.

SOUTH DAKOTA

University of South Dakota, Vermillion

Bachelor of Fine Arts in Advertising Art:

71 hours in art courses including 15 hours in advertising art.

Additional courses outside the art department include:

3 hours of journalism.

A Total of 8 hours of art courses and 3 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

TENNESSEE

Austin Peay State College, Clarksville

Bachelor of Fine Arts, major in advertising design:

48 hours in art courses including 15 hours in advertising art.

A total of 12 hours of art courses include commercial graphic arts materials and procedures as a part.

TENNESSEE

Memphis Academy of Arts, Memphis

Bachelor of Fine Arts, major in advertising design:

120 hours in art courses including 36 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

Memphis State University, Memphis

Bachelor of Arts, major in commercial art:

81 hours in art courses including 12 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

University of Tennessee, Knoxville

Bachelor of Fine Arts, major in commercial design:

30 hours in art courses including 18 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

TEXAS

East Texas State University, Commerce

Bachelor of Arts, major in commercial art:

76 hours in art courses including 16 hours in advertising art.

Additional courses outside the art department include:

4 hours industrial printing, 4 hours photography.

A total of 8 hours of art courses and 8 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Lamar State College of Technology, Beaumont

Bachelor of Science in Commercial Art:

72 hours in art courses including 18 hours in advertising art.

A total of 18 hours of art courses include commercial graphic arts materials and procedures as a part.

North Texas State University, Denton

Bachelor of Arts, field of concentration in advertising art:

58 hours in art courses including 21 hours in advertising art.

Additional courses outside the art department include:

3 hours industrial graphic arts, 3 hours business advertising.

A total of 15 hours of art courses and 6 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Southern Methodist University, Dallas

Bachelor of Fine Arts, program of study in commercial art:

69 hours in art courses including 18 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

Southwest Texas State College, San Marcos

Bachelor of Science in Commercial Art:

38 hours in art courses including 9 hours in advertising art.

Additional courses outside the art department include:

6 hours industrial printing, 3 hours photography.

A total of 3 hours of art courses and 9 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

Stephen F. Austin State College, Nacogdoches

Bachelor of Arts, emphasis on commercial art:

36 hours in art courses including 12 hours in advertising art.

A total of 14 hours of art courses include commercial graphic arts materials and procedures as a part.

Texas Christian University, Fort Worth

Bachelor of Fine Arts, major in commercial art

60 hours in art courses including 12 hours in advertising art.

A total of 9 hours of art courses include commercial graphic arts materials and procedures as a part.

Texas Technological College, Lubbock

Bachelor of Advertising Art and Design:

73 hours in art courses including 18 hours in advertising art.

A total of 14 hours of art courses include commercial graphic arts materials and procedures as a part.

Texas Woman's University, Denton

Bachelor of Arts, major in advertising design:

62 hours in art courses including 18 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

VIRGINIA

Richmond Professional Institute, Richmond

Bachelor of Fine Arts, major in commercial art:

88 hours in art courses including 28 hours in advertising art.

A total of 28 hours of art courses include commercial graphic arts materials and procedures as a part.

WASHINGTON

Central Washington State College, Ellensburg

Bachelor of Arts, major in commercial art:

60 hours in art courses including 32 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

WASHINGTON

University of Washington, Seattle

Bachelor of Fine Arts, major in graphic design:

127 hours in art courses including 48 hours in advertising art.

Additional courses outside the art department include:

5 hours of advertising.

A total of 18 hours of art courses and 5 hours of courses outside the art department include commercial graphic arts materials and procedures as a part.

WISCONSIN

Layton School of Art,

Bachelor of Fine Arts, major in advertising design:

60 hours in art courses including 23 hours in advertising art.

A total of 15 hours of art courses include commercial graphic arts materials and procedures as a part.

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