

ROCHESTER INSTITUTE OF TECHNOLOGY

A Thesis Submitted to the Faculty of
The College of Fine and Applied Arts
in Candidacy for the Degree of

MASTER OF FINE ARTS

The Development of a Modular Poster Design:

The Cleveland Quartet

By

Paul Hamilton Neville

November 6, 1986

APPROVALS

Adviser: R. Roger Remington

Date: July 27, 1987

Associate Adviser: Bob Keough

Date: 7-31-87

Associate Adviser: Joe Watson

Date: 7/28/87

Special Assistant to the
Dean for Graduate Affairs: Philip W. Bornarth

Date: 4/31/87

Dean, College of
Fine & Applied Arts: Robert H. Johnston Ph.D

Date: 8/12/87

I, Paul Hamilton Neville, hereby grant permission to the
Wallace Memorial Library of RIT, to reproduce my thesis in whole
or in part. Any reproduction will not be for commercial use or
profit.

Date: 7/14/87

TABLE OF CONTENTS

APPROVALS.	2
TABLE OF CONTENTS.	3
LIST OF ILLUSTRATIONS.	4
ACKNOWLEDGEMENTS	5
AUTHOR'S NOTE.	6
INTRODUCTION	7
RESEARCH	9
DESIGN	11
PRODUCTION	19
PRINTING	31
CONCLUSION	34
ILLUSTRATIONS.	36

LIST OF ILLUSTRATIONS

1.	Thumbnail/Four Sections	38
2.	Thumbnail/Inner Square.	39
3.	First Black and White Rough	40
4.	Second Black and White Rough.	41
5.	First Color Comp.	42
6.	Third Black and White Rough	43
7.	Second Color Comp	44
8.	Typesetting Chart	45
9.	Shape of Type	46
10.	Retouching Example.	47
11.	Cleveland Quartet Promotional Flyer	48
12.	Halftone Screen Textures.	49
13.	Paper Sample/Simpson Teton Sage 80lb. Cover	50
14.	Pantone Paper Samples	51
15.	Finished Posters.	52

ACKNOWLEDGEMENTS

I wish to thank the following people who helped make this project possible:

Roger Remington

Bob Keough

Joe Watson

Heinz Klinkton

Harold Scharmberg

The Department of Graphic Design

Bob Webster

Tim Waltz

Andrea Lyon

Henry Quantrille

Seneca Paper Company

AUTHOR'S NOTE

Because of the difficulties in describing a complex visual arrangement such as these posters, it is advisable to view the color photograph of the posters (figure 15) and other illustrations if confusion occurs.

INTRODUCTION

My thesis grew out of a desire to produce a visual work that would be printed while still leaving room for experimental design. The idea of producing a set of posters about the Cleveland Quartet originated from Roger Remington. I approached Roger to ask about possible subjects for my thesis and he suggested the Cleveland Quartet project. Roger has known a quartet member, Donald Weilerstein, for some time and had been interested in producing something about them. The arrangement was to produce the posters with Roger acting as the Art Director and myself as the Graphic Designer.

It should be explained at this point that this project was not undertaken in conjunction with the quartet. I felt that if I worked with the quartet's publicity people, compromises in design would have to be made. By working alone I was free to turn these posters into an experimental typographic experience. Because the Quartet was used as a subject, it was decided to present each member with a set of the posters.

Aside from the actual thesis requirement, my driving motivation during this undertaking was to produce a strong highlight to my portfolio. Having already completed a number of theoretical design projects, I was interested in some type

of practical application. This would give me more experience with typographical design. In addition to this, I felt that more dealings with color would help my portfolio. The four posters that were produced on the Cleveland Quartet have more than satisfied the goals that I set about to achieve.

The development of these posters roughly follows these four steps: research, design, production, and printing. Because of the nature of this project, each of these steps overlapped in some way.

RESEARCH

Having firmly decided on the Quartet project, the first step in the process was to research and acquire the necessary information. I tentatively decided during my first meeting with Roger that the posters would be divided into four sections. The purpose of each section is to describe a different aspect of the Quartet. The first division was a general description of the Quartet and its history. This would also include a photograph of the Quartet together. The second division was the performers. Each member's photograph would be shown along with their biography. Since the Quartet plays on original Stradivarius instruments, highlighting this fact became the basis of the third panel. The last panel would deal with the Quartet's repertoire. Initially the idea was to illustrate the repertoire symbolically.

In order to tie this information together visually, a common link had to be found. The initial idea was that each division would have to include a heading—Cleveland Quartet, a sub-head—to explain each part, and text related to each topic. With all this in mind I set out to find my information.

Since the Cleveland Quartet resides at the Eastman School of Music, I made that my first stop. At the ticket counter I was able to get two flyers on the Quartet. One flyer was on the Ranlet

Concert Series and the other outlined their record releases on RCA and Philips records. The latter also included photographs of the Quartet. Next I went to the Sibley Music Library. After asking about information on the Quartet, I was directed to the publicity department of the Eastman School. The information that I found there was the greatest help to the project. After explaining my situation, I was able to go through the files on the Cleveland Quartet. I copied the press releases on the Quartet, the biographies of the members, and the history of their instruments. I was also able to get copies of the publicity photos that are used for the Quartet.

In addition to this, I went through Wallace Memorial Library and the Public Libraries to try to find photographs of violins, violas, cellos, and musical symbols. Another prime source of information was the book Musical Instruments of the World. This book provided the biography on Antonio Stradivari. Also included in his biography were the ways in which he altered the designs of his instruments to produce the remarkable tones for which his instruments are known. Stradivari's signature and personal mark were reproduced from this book.

DESIGN

Designing the Cleveland Quartet posters was a process that continued through the mechanical stage. From the start of the design phase, I wanted these posters to be a typographic experiment. For unity, as well as aesthetic reasons, I wanted to use the text type as shapes that contributed to the overall feeling of the design. The feeling of the design that I tried to achieve was a classical and interwoven relationship of elements, much like the Quartet members' relationship to one another. Dividing the posters into four sections was another obvious play off the Quartet structure. From the earliest roughs, this division was not a total split. Elements were meant to overlap and spill over into the next section.

The factors that led me to use Caslon for the display type are directly related to the instruments the Quartet performs on. The Cleveland Quartet performs on four Stradivarius instruments made between 1692 and 1736. The power and tone quality of these instruments are said to be unmatched. What I tried to do was match a typeface to the characteristics and quality of a two hundred fifty year old violin. I wanted an Old-Style serif typeface with a distinct elegance. One that would show its age but still retain a strong character of

craftsmanship. I searched through Roman typefaces paying particular attention to the upper case Q because that character would play a prominent role in the design. Out of all the Roman typefaces, I felt that Caslon 540 was best suited for the mood that I was trying to achieve. As it turned out, William Caslon (1692-1766), was designing the original Caslon faces around the time that Antonio Stradavari (1644-1737), was designing his instruments.

Helvetica 14/16 was used for the text type. There were three main reasons for this decision. The first reason is that we were screenprinting on an uncoated stock with a slight texture. Although Helvetica is not the best text face, it was felt that it would reproduce well with this process and these variables. A serif typeface would have lost considerable detail at this size and under these conditions. The second reason is that a large point size would help insure that the characters remain intact and legible. The third factor is that the text is intended to act as a shape in itself. Because the image area is 16x16 inches, and other large type is used, a 14-point text does not overwhelm the page.

The 2-point leading helps insure the legibility of these blocks of type. At the same time the line spacing is still tight enough that the type is seen as a shape. The cap-height of 14-point Helvetica is 10 points, thus allowing 6 points of negative space between the baseline and the cap-height of the line below that. I feel that the choice of Helvetica 14/16 was a good solution to the problems I encountered.

The initial idea when I approached these posters was to have a large square format that would be divided into four equal sections. I started to work on black-and-white roughs that were eight inches square, half the size of the finished panels. These roughs were a combination of Xerox images and hand lettered type. The first thing I did was to comp the heading—Cleveland Quartet. Then I began constructing a square, within the square format of the first panel (upper left). The idea of this arrangement was to have four panels that would form one large square. Inside each panel would be a smaller square that would be offset at a 45° angle. The proportion of the panel to this inner square is 4:3. These square areas overlapped and became the basis of a constructional grid that was employed to order visual elements and create an underlying unity to the panels.

The first rough established the basic format that the posters would follow. The first panel was concerned with the Quartet in general. At this point I was unsure if the posters would be printed as one large image, or in four separate sections. Because of this the heading was repeated in each section. The heading started out being quite prominent in the first panel, and decreased in size on each panel in a clockwise direction. This arrangement allowed the panels to be separated. Any combination of panels could be displayed without appearing to be redundant.

Members became the basis for the second panel (upper right). In this panel an inner square was formed by placing the member's photograph in each corner of the square. Type was then laid down inside and outside of this square to help define it better.

Initially, the third panel (lower right) was to incorporate a symbolic representation of the instruments the Quartet used. This was later dropped for a more realistic representation of each instrument. In addition to this, it was felt that the dates when Antonio Stradivari created his instruments was important and thus included. Copy for the third and fourth panels were not included in this rough. I was more concerned with establishing imagery at this time.

The subject of the fourth panel (lower left) is the Quartet's repertoire. From the start of this project it was handled as a typographic solution. Large type would be used in place of imagery. Nine major composers, that the Quartet draws on when performing, were arranged utilizing different typographic variables.

Because of the nature of the design, it was important to have something down on each panel before changes were made. The first rough, in a way, was just used to get a feel for the whole before evaluations could start. Only three black-and-white roughs are shown because much of the designing was taking place

on the same rough. Numerous changes were made on the same rough to save time. Placements, sizes, and relationships were ripped up and reevaluated. Because these roughs were reworked, and not created from scratch, the development process appears much shorter and more disjointed than it actually was.

During the development of the second rough significant changes were made, ideas became better illustrated, and the posters were developing into a more unified set. the second rough now included all heads, sub-heads, and all of the copyfitted copy. Copy for the fourth panel was culled from the middle of the first panel's copy. This paragraph dealt with the Quartet's repertoire. In addition to this a list of compositions, their composers, and records recorded by the Quartet were added. The typographic section on the composers was redesigned to fit inside the inner square of this panel.

In the third panel the copy consisted of a history of the Quartet's instruments and a biography of Antonio Stradivari. The symbolic representation of the instruments was dropped in favor of the pictures. Stradivari's personal mark and his signature were added. The dates of the instruments were reduced to tone down their overwhelming presence in the first rough.

Shapes that the copy occupied were redesigned in the second panel. This was an effort to define this square more clearly and to bring better unity into this panel. One of the

major problems I encountered in the first panel was the placement and size of the sub-head (The Quartet). Various combinations were tried but this didn't get resolved until the third rough.

During the development of the second rough I outlined areas that were to become shapes of color. On a copy of this rough I started to designate areas of color with gray markers. It was soon realized that this approach was unacceptable and that a color comp was needed. This was accomplished by producing a film positive. The positive could then be laid over colored paper. By going this route, the design process was helped immensely. Throughout this design process I had been thinking of color combinations that would accent a quartet that plays on 250 year old instruments. I knew that the type and the halftones would be best represented in black. I also wanted some shade of brown to give the feeling of wood instruments. A gray paper stock was decided on to reduce the overall contrast and to add the feeling of an aged classical appearance. Blue came about as a very comfortable highlight and one that was quite compatible with both brown and gray.

The immediate benefit of the first color comp was the idea of using blue to highlight the sub-heads. Each sub-head was redesigned to fit inside its particular panel. This was done to allow each to be printed separately. The placement of broad areas of brown were used to help balance the overall composition.

Upon reviewing this comp there were still notable problems that would have to be worked out in another black-and-white rough.

One of these problems is that there was no unification in size or spacing of lower case type in each sub-head. The Instruments panel was chosen as the basis that the other panels would follow. To accomplish this the type size was standardized in each panel. Optically even letter spacing was employed to further help this concept. With this in mind the other three panels were redesigned. These guidelines necessitated major changes in the first and second panels. In the first panel the sub-head was placed so that it ran uphill on the same angle as the halftone. The second panel required changing both the head and the sub-head. Members now ran across the top of the panel. Cleveland Quartet followed the outline of the halftone. The inner square of this panel was again changed for better balance and more interesting shapes of type. The results of redesigning the sub-heads produced bold, interesting typographic configurations that clearly defines the topic of each panel. Each panel was now self-contained with respect to typographic information. Only certain visual elements overlap between the panels.

The second color comp consolidated and refined ideas put forth in the first comp. Two ideas were never indicated on this comp because of considerations of time and money. The first is the introduction of white. Certain aspects of the posters were

lacking in contrast and definition. These are the halftones and the headings (Cleveland Quartet). These problems were solved by adding a fourth color to the job (white). The other element that was never shown concerns the repertoire panel. The first letter in each composer's name is reversed out of the brown background allowing the letterform to appear gray. By doing this a more dynamic design evolved in this panel. Another aspect used to visually tie these panels together is to print the type over areas of color. This theme appeared in all of the panels.

Perhaps I should be calling the color comps color roughs. I knew that when I began typesetting that elements in the design would have to change. When working on something of this nature, experimental typographic applications, certain design changes and refinements are made at the mechanical stage. I used my "working color rough" as a guide as I approached the mechanical stage of the project.

The nature of the design determined the printing order. Brown was the base color because it was overprinted by the other colors. Blue was next, which was overprinted by white and followed by black. Because the majority of the design consists of black, it was approached first. The fact that the final text shapes would determine other design decisions was another factor in this choice.

PRODUCTION

My first concern at the production stage was locating typesetting equipment capable of producing large display type that had a Caslon font. Some of the characters in this design would exceed four inches in height. My second concern was finding typesetting capabilities that would allow me to set text copy in various shapes. For monetary reasons I confined my search to Rochester Institute of Technology. Nobody I talked to could help me. Roger Remington finally remembered the existence of a Staromat phototypesetter located in a storeroom of the College of Fine and Applied Arts. As it turned out, the Staromat did have the Caslon font that I was looking for. As for the text type, I set out to produce them on an obsolete machine called the Omnitech/2000 Linotype. I had used this typesetter many times before but it was not designed to do what I had in mind.

I started the mechanicals with the first panel, The Quartet. On a 20"x20" board, I defined the 16" square image area with crop marks. Then I laid down registration marks in each corner. Working against the color rough, I sketched in areas that different elements would occupy. Now I was ready to set the first block of type.

Being a designer, and not a copy writer, I decided to change as little of the copy as possible. I have mixed feelings on taking this stand. The Eastman School of Music's publicity department seemed to be content with some run-on sentences and awkward wording of their press releases. Minor changes were made in the copy with the intent of polishing over some of these irritating passages.

To set type on the Omnitech you have to start by defining certain variable commands. I set the Helvetica font to a size of 14 points and the leading to 16 points. The first text shape was defined by a vertical strip of brown and the edge of a half-tone set at a 45° angle. Because the leading was 16 points, increasing the measure consecutively by 16 points should have resulted in a perfect 45° angle. To ensure this angle, each line had to be force justified. In order to do this the copy was keyed in first. Then the line measure was entered. Next the file had to be composed. After the file is composed, it is called a "T" file and it is ready to be set. By looking at the T file one can tell where the sentence or word breaks before going on to the next line. The force justification command is then entered at this point on the uncomposed or "U" file. Then the next line measure (16 points longer) is entered. This process is repeated as many times as necessary. It takes a long time to set type in this manner.

Once I finished this process and set the block of type I realized that my problems were just beginning. The angle that resulted was steeper than 45° . Because of calibration errors, the typesetter was setting the line length shorter than it should be. As the measure was increased in length, the error also increased. To solve this problem I developed a chart comprised of increasing line measures and the errors in each measure. Using this chart I was able to compensate for any typesetting error. Because of the uneven characteristics of letters, the sides of my shapes had to be optically aligned. This chart was also used to help accomplish this alignment. By indenting the left hand side of the column, from zero to three points, the characters are optically hung to produce a straight line. For instance, a capital T would be two points farther to the left than a p or an F. A similar method is used for the angle on the right side of this triangle. Ascenders or hyphenated characters were moved to the left by shortening the measure. In this way each line is tailored to fit into a triangle. By adjusting the amount of words in each line the last line of type was made to end up fully justified, without any noticeable rivers (large gaps between words). Blocks of type were set numerous times so that these subtle adjustments could be made.

The display type was set on the Staromat, a photo typesetter. This typesetter works on the same principle as a photographic enlarger, and it looks quite like one. Instead of negatives, the Staromat has a long font encased in plastic. The characters of the font are reversed out of a black opaque strip sandwiched in the plastic. On the base of this enlarging device, an easel is attached to a double track system. This allows the easel to move in any direction. Type size is controlled by two lenses and the vertical movement of the enlarging head. A control box governs the exposure time, intensity of the exposure, and the safelight, which allows you to see the character in red light.

To set type, the character is selected by sliding the font to the position where the character is illuminated. Next, the character height is adjusted. Contact speed photographic paper is then predeveloped for 15 seconds. This paper is squeegeed onto the easel, removing excess developer. After the exposure is made, the image of the character appears, thus allowing you to visually space the characters in the word you are composing. After the word is composed, the paper is developed, fixed, washed, and dried.

Because of imperfections in the font, characters set over 2" in height often had to be retouched. When I set large characters such as the T and Q in the first panel, I would generally set them twice the size I needed. Then I would shoot a positive

paper photostat. The edges of the characters could then be retouched with technical pens holding white and black ink. This was done freehand and also with a straight edge or french curves.

The head, Cleveland Quartet, was composed as two separate words. The sub-head, The Quartet, was set as separate characters. This was done because wide, even letterspacing is easier and more accurately spaced by hand. The halftone of the Quartet performing together was shot with an 85 line screen. This photostat was then enlarged by 142%. The edges of this area (and all other halftones) were ruled and inked in because the halftone did not fill the whole area.

I began the Members panel by carrying over the square (halftone) from the first panel. This was then broken up into two equal sized triangles. The top edge of the lower triangle became one of the defining edges of the inner square of this panel. The top of this square was defined by the bottom of the blue rule. Trying to describe this design process one part at a time is rather difficult and perhaps misleading. Each element in the design is interrelated—not only by a constructional grid, but in terms of building these pieces together in a specific time frame. Every element was sketched in before they actually went down on the board. Relationships were looked at alone, in the whole and then reevaluated and adjusted. But the design process mainly evolved around the type. The width of the blue

rule at the top of the panel was determined by its relationship to the type ([M]embers) that would be printed over it. Only then could the apex of the square be determined.

Once the photographs were sketched in I started to set the text. Peter Salaff (top), was first because this was the tightest area. This triangular shape of type was set by indenting each line 16 points more than the line preceding it. Four words were edited so that the shape would end flush with the bottom of his picture. To reduce rivers near the bottom of this triangle, character spacing was increased in varying degrees in the last three lines.

Donald Weilerstein's biography was set next (left). This shape was accomplished by a series of decreasing indents and decreasing line measures. Then it was laid down on the board at a 45° angle. Once this shape was finished it allowed me to work out the shape for Paul Katz (bottom). The remaining area was left for Atar Arad. This shape of type was simplified and the shape of his photograph redesigned because of the complexity of setting type into areas with short line measures.

These photographs were taken from a flyer about the Quartet. A photostat was shot from this flyer with an enlargement of 400%. The background was then inked in and the photograph's screen pattern was retouched. By inking in the background I was free to separate the photograph and make shapes that fit my design.

Once the photographs were in place I pasted up the sub-head, Members. The head (Cleveland Quartet) was then sized and then set aside until the white overlay was constructed.

In the Repertoire panel, the square's alignment is based upon the Members square. The bottom corner of this square is defined by the edge of the image area. In the Instruments panel, the square is defined by the left-hand edge of the Members square and the right-hand side of the image area. Related to this inner square theme is progression from a closed in, defined square to a more open square. The former is The Quartet, followed by Repertoire, where reversed type opens the area up somewhat. Members is even more open, although the square motif is still easily recognized. Instruments completes the progression with a subtle square implied here.

In the Instruments panel, as well as in Repertoire, the shapes that the text formed were decided by other elements in the composition. Antonio Stradavari's biography was placed to define the edge of the inner square with the first line of type. The other block of type defined the opposite edge of this square and was also shaped by the areas of blue. The decision to use the halftone screen as a texture for the instruments stemmed from the fact that it would be a natural progression of screen sizes throughout the posters. This was due to the severe enlargement of the members' photographs (because of this enlargement of 400%,

the screen pattern is quite visible). To ensure a large dot pattern on the instruments, they were shot at a reduced percentage with an 85-line screen (see figure 12). Then these photostats were enlarged, thus increasing the size of the dot pattern. The sub-head, Instruments, along with the dates of the instruments were hand spaced. Stradavari's personal mark and signature were sized and positioned on the mechanical. Finally, the credits were typeset and put on the mechanical.

The sub-head, Repertoire, was set on the Staromat and then spaced by hand. Selections on RCA and Philips records were set horizontally on the Omnitech. This shape was accomplished by setting the type in a column that ran on a 45° angle. The column was defined by indents and decreasing line measures. To align this column on the mechanical I simply rotated it counter clockwise until it was vertical. "On Philips Records" was cut from this column and pasted into place. Heavier type weights were used to differentiate this from text type and to add emphasis to their recordings. After "Dvorak" was in place, I used the "v" to define the position of the first line of type for the general description of Repertoire.

The characters inside the square of the Repertoire panel were set on the Staromat. With the exception of the first letter in each name, each name was set at one time. This allowed me to overlap and combine these characters in various ways. Each name

was set and a film positive was made to aid in the layout of this square. These initials were then positioned on a separate sheet of acetate. Rubylith was used to define the outside edges of this square area. A film negative was then shot which produced a square area with initials reversed out of it. This allowed the first initial of each composer to be printed reversed out of brown. This negative was later stripped into the brown overlay.

The screen printing process requires a film positive to expose the screen. The four mechanicals, representing black areas, had to be photographed into this format. Originally I had cut the color overlays (for brown, blue, and white) out of rubylith, using the mechanicals as a guide. Because of an error in the camera, these overlays were no longer in register and had to be recut. This time I cut them over the (black) film positives to ensure correct registration.

Because I wanted a 2" border around each poster, the registration and crop marks had to be moved farther out from the image area. The solution to this was to place each (black) film positive on a larger sheet of acetate. The final size of each poster would be 20"x20". Each sheet of paper was 20"x26". This allowed 3" on either side of the poster where registration marks were placed and printed. The edge of the registration marks became crop marks. They defined the area to be trimmed and thus do not appear in the final prints.

Each overlay represents either brown, blue, or white. These overlays were cut from sheets of rubylith. First the rubylith was removed from the edges leaving the acetate backing. They were then positioned over their respective film positive. Registration marks were then placed on the acetate directly over the marks on the film positives. Shapes of color were then cut out of the rubylith.

In the Repertoire panel the film negative was stripped in on the brown overlay. The white heads were film positives that were taped in place on their respective white overlays. The white area under the halftones were tucked in to prevent registration errors from becoming obvious. This was done by cutting the white overlay between $1/16$ and $3/32$ of an inch smaller than the black area at each edge. This was not done where the white defines the edge of the image. This method was also used for other colors where registration was especially important; in The Quartet panel between the blue and brown (brown extends under the blue), and the "M" in Members (blue extends under the black) are other examples of this technique.

Toward the end of the design process I was looking at paper and ink color combinations. As a starting point I used the Pantone Matching System. Once I had found the correct colors I bought sheets of Pantone paper to use as a guide for the rest of the process. The paper was Pantone 422, a light gray. The

blue and brown were Pantone 307 and Pantone 154 respectively (see figure 14).

Having an idea of the paper color in mind, the next step was to visit the paper merchants in the Rochester area. I went to Alling & Cory and Seneca Paper companies. Between these two paper merchants I looked at samples from some of the major paper mills including: Appleton's Currency series, Mohawk's Irish Linen, Simpson's Teton series, Curtis Linen, Strathmore's Grandee series, and various Hammermill cover papers. The paper that really struck me as being most suitable for this project was carried by Seneca Paper Company. The paper is Simpson Teton Sage, 80lb with deckle edge. Simpson describes the Teton series in this way:

Teton was started 40 years ago with a commitment to rival the look and feel of the finest handmade European papers. Today it is recognized as the industry's leading true felt finish paper.

As the name Sage implies, the paper is a light gray color with a very slight hint of blue and green (see figure 13). The surface is fairly smooth, although there is a slight random textured quality about it.

I decided on getting 150 press sheets that measured $26\frac{1}{2}$ "x40". This would then be cut in half giving me 300 sheets measuring 20"x $26\frac{1}{2}$ ". This would allow a 16" square image area with a 2" border and still have 3" on either side where registration marks would be printed. With 300 sheets, I anticipated a run of

50 prints for each section. This arrangement would leave 25 sheets per poster extra for setup and registration.

Roger suggested contacting Henry Quantrille at Seneca Paper Company to inquire about the possibility of having the paper donated. He couldn't give me the paper outright, but offered it to me at his cost. This brought the price down from over \$200 to just under \$50.

PRINTING

Throughout the design and production process I had been consulting with Mr. R. Webster, Professor of the School of Printing, and two of his lab assistants, Andrea Lyon and Tim Waltz. Whenever I had a question about the printing process they were always glad to help. When it came time to choose ink colors, Andrea steered me to Wiederhold Screen Printing Ink. She did this because Wiederhold has produced a color matching system for mixing their inks and also because these inks have outstanding color saturation which gives them added brilliance.

Tim Waltz ended up printing the posters. Each poster required four screens. Together, this job would require 16 screens and 16 printings. Because of the complexity of this job, we decided to print the posters on four consecutive Saturdays. During each printing session, one color would be printed on each of the four posters. As I said before, the order of printing was brown, blue, white, and black.

On the first run, to facilitate the drying process, the prints were run through a dryer. After Tim ran 150 sheets I became curious about how the black would look against the brown. I took one of the black films and laid it over one of the prints. To my dismay, the registration marks were off by close to a quarter

of an inch. I called Tim over and he recognized the problem. The paper was shrinking as it went through the print dryer. We still had about 150 sheets of unprinted paper which would make an edition of 37 sets of posters. So we started all over again, this time stacking the prints on racks to dry.

The next week blue was printed. This went smoothly as did white, which was printed the following week. Problems arose again when black was printed. Tim started with the first panel, The Quartet. The first problem was that the screen was sticking to the print because of the large area of ink coverage. This left a pattern on the print making it unusable. The second problem was that the texture of the paper made it hard to reproduce the characters exactly. Certain areas were dropping out. I'm still not sure if this was due to the paper or the viscosity of the ink. I had shown the paper to both Andrea Lyon and Bob Webster, specifically asking if the texture of the paper would interfere with the printing. In both cases they had said that this texture would not interfere with the printing process.

Another problem that appeared when the black screens were printed was that the black areas were slightly larger than the other image areas. I attribute this to the paper losing some moisture, thus shrinking during the month in which the printing took place. Overall, I was pleased with the final result of the printing job.

For the thesis exhibition, I framed each poster separately. They were framed with 20"x20" chrome frames and hung with a 1½" space between the frames. Although this arrangement looks quite good, I personally prefer to view the posters as a whole single unit (see figure 15).

CONCLUSION

In conclusion, my feelings are that the development of a modular poster design about the Cleveland Quartet has been a valuable experience to me personally, and a successful design project.

Although it was a valuable learning experience, it was not without problems. The most obvious problem concerns the type. There are only three typographical errors. Considering the amount of type that went into this design I feel that these three instances constitute an acceptable error ratio.

This undertaking has also made me aware that one has to pay attention to details, even when the responsibility should be taken by another person. One example of this is when the film positives were made from the mechanicals. There were errors in both the camera and also the camera operator. The first time the films were shot slightly larger than 100% and I rejected them. When I received the films the second time I noticed that the registration marks matched the mechanical from left to right but not from top to bottom. This was because the base of the camera was not parallel to the film plane and thus was distorting the image in one direction. This problem added to my work load because I had to recut all of the overlays again.

Another example of looking after other people's work occurred during the printing. I was the one who noticed that the paper was shrinking as it went through the print dryer. As a result of this and other printing-related problems, I ended up with an edition of 20 posters instead of the 50 that I had planned on.

There is one other incident that I wish to include that concerns typography. When I first started setting text type into shapes I was worried that rivers in the type would detract from the overall look of the posters. To get a second opinion I took the mechanicals to Heinz Klinkton. I presented my work to Heintz and explained by dilemma. He then asked me what was most important and I explained how I wanted the type to act as shapes that contributed to the overall feeling of the design. He was silent for a minute or two and then he explained the way he saw it through an analogy. He said that the posters are like a fine restaurant, people will occasionally burp there, but nobody notices them. Reassured with the analogy, I continued to set the type into shapes.

To top off a successful project, I was pleased to learn that the Wallace Memorial Library choose my set of posters to be included in its 1986 Thesis Purchase Prize Awards. I am proud to have my posters included in the Rochester Institute of Technology collection of student work.

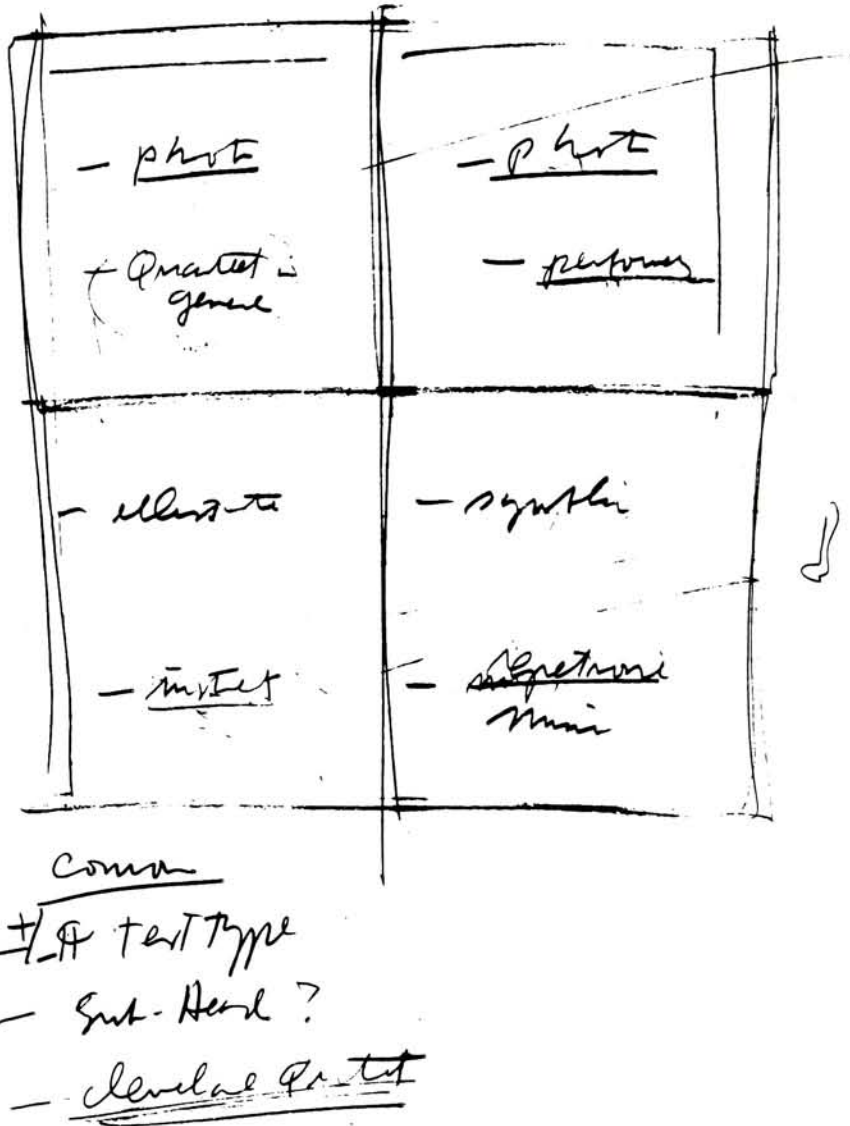


Figure 1

Thumbnail Roger developed during our first meeting showing the division of the posters into four sections.

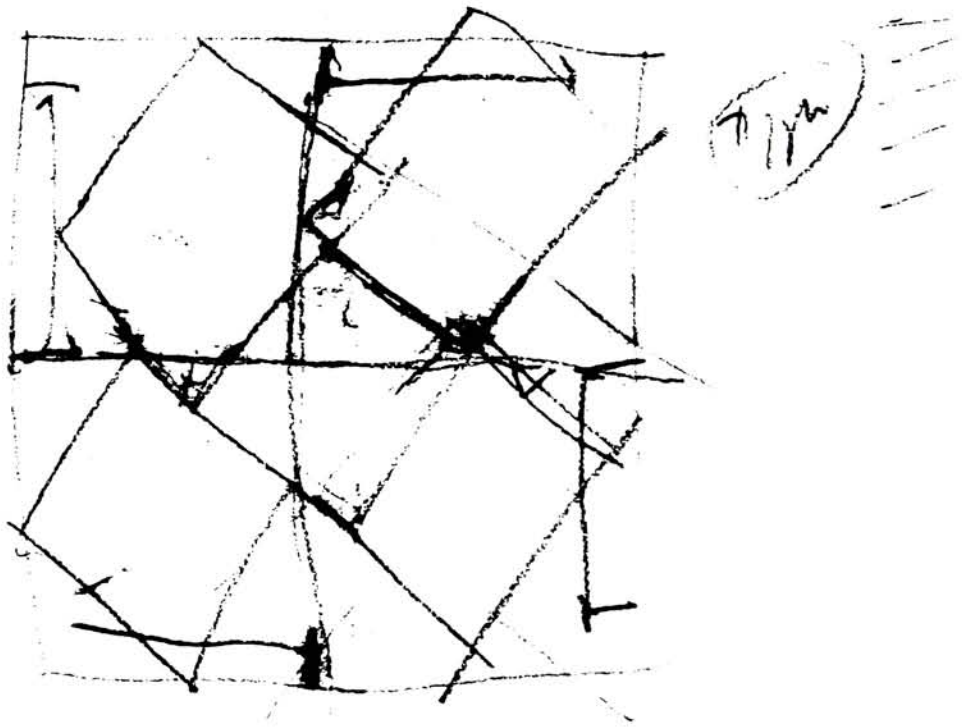


Figure 2
Thumbnail of overlapping inner square concept.



Figure 3
First black and white rough.

Cleveland Quartet

The Quartet

Members

Quartet

Cleveland Quartet

Repertoire

Instrument's

Quartet

Cleveland Quartet

1692
1724
1731
1736

Figure 4
Second black and white rough.



Figure 5
First color comp.

Cleveland Quartet

The Quartet

Cleveland Quartet

Members

Quartet

Cleveland

Quartet

Repertoire

BARBER

Brahms

Beethoven

Britten

Debussy

Dvorak

Furtwängler

Hayden

Shostakovich

Schnittke

Scriabin

Strauss

Tchaikovsky

Verdi

Wagner

Worak

Ysaÿ

Instrumentals

Cleveland Quartet

Ms. Furtwängler

1692
1724
1731
1736

Figure 6
Third black and white rough.



Figure 7
Second color comp.

LINE #	MEASURE	ACTUAL MEASURE	NEG. LEFT	NEG. RIGHT	ERROR IN MEASURE	ADD TO MEASURE	SUBTRACT FROM MEASURE	NEW MEASURE	
									MEMBERS 242
									247 MEMBERS
1	3.2	1.11	2			0			I=1 ✓ 3.2
2	5.10	5.0	1			0			I=2 ✓ 5.10
3	7.1	6.10	1		3	0			I=1 ✓ 7.3
4	8	7.10			4	1		8.1	I=3 ✓ 8.5
5	9.10	9.8			2		1	9.9	I=1 ✓ 10
6	11	10.8		04	4		3	10.9	✓ 11.1
7	12.4	12.0			4	1		12.5	✓ 12.9
8	13.8	13.3			5	2		13.10	✓ 14.2
9	15	14.7			5	2		15.2	✓ 15.9
10	16.4	15.11			5	2		16.6	✓ 16.10
11	17.8	17.2			6	3		17.11	✓ 18.5
12	19	18.6		04	6	2		19.2	✓ 19.4
13	20.4	19.10			6	3		20.7	✓ 20.11
14	21.9	21.1			7	4		22.0	✓ 22.4
15	23	22.5	1	04	7	4		23.4	I=2 ✓ 23.6
16	24.4	23.9	2		7	4		24.8	I=1 ✓ 25.2
17	25.8	25.0	3		8	5		26.1	I=0 prints 26.5
18	27	26.4	2		8	5		27.5	I=3 ✓ 27.9
19	28.4	27.8			8	5		28.9	I=1 ✓ 29.3
20	29.8	29.0	1		8	5		30.1	I=2 ✓ 30.5
21	31	30.3			9	6		31.6	I=3 ✓ 32.0
22	32.4	31.7			9	6		32.10	✓ 33.6
23	33.8	32.9			11	8		34.4	✓ 34.9
24	35	34.3	1		9	6		35.6	I=2 ✓ 35.10
25	36.4	35.6			10	7		36.11	I=3 ✓ 37.3
26	37.8	36.8			10	7		38.5	✓ 38.9
27	39	38.2			10	7		39.7	✓ 39.11
28	40.8	39.9			11	8		41.4	✓ 41
29	42	41.2			10	7		42.7	✓ 42.11
30									

2.3 N →

10 N →

U 242

T 312

305

T 356

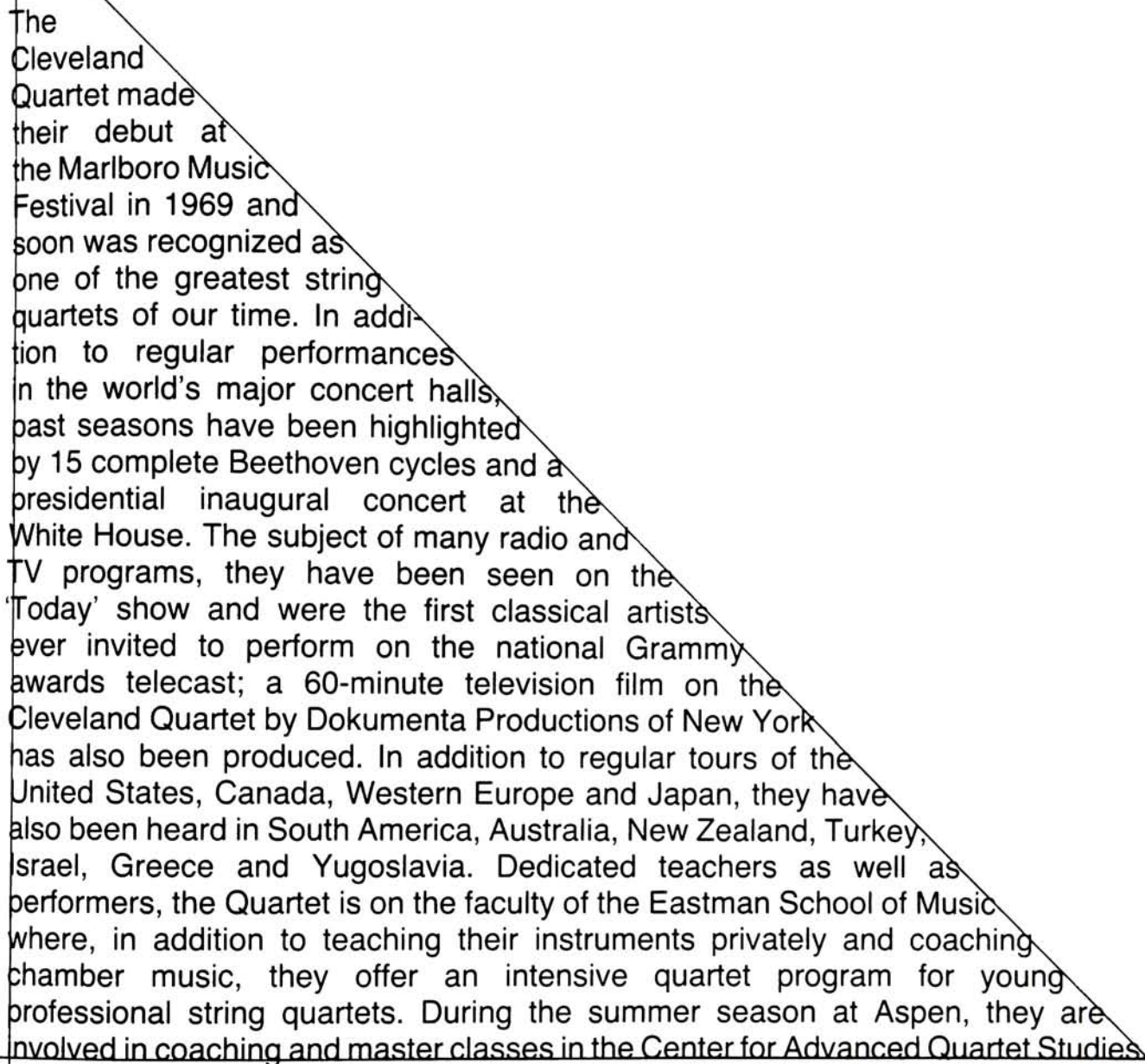
355

152-241

153-239

Figure 8

Typesetting chart developed to counter errors in measure and adjustments to optically align characters.



The Cleveland Quartet made their debut at the Marlboro Music Festival in 1969 and soon was recognized as one of the greatest string quartets of our time. In addition to regular performances in the world's major concert halls, past seasons have been highlighted by 15 complete Beethoven cycles and a presidential inaugural concert at the White House. The subject of many radio and TV programs, they have been seen on the 'Today' show and were the first classical artists ever invited to perform on the national Grammy awards telecast; a 60-minute television film on the Cleveland Quartet by Dokumenta Productions of New York has also been produced. In addition to regular tours of the United States, Canada, Western Europe and Japan, they have also been heard in South America, Australia, New Zealand, Turkey, Israel, Greece and Yugoslavia. Dedicated teachers as well as performers, the Quartet is on the faculty of the Eastman School of Music where, in addition to teaching their instruments privately and coaching chamber music, they offer an intensive quartet program for young professional string quartets. During the summer season at Aspen, they are involved in coaching and master classes in the Center for Advanced Quartet Studies.

Figure 9

A triangular shape of type with rules showing alignment of characters.

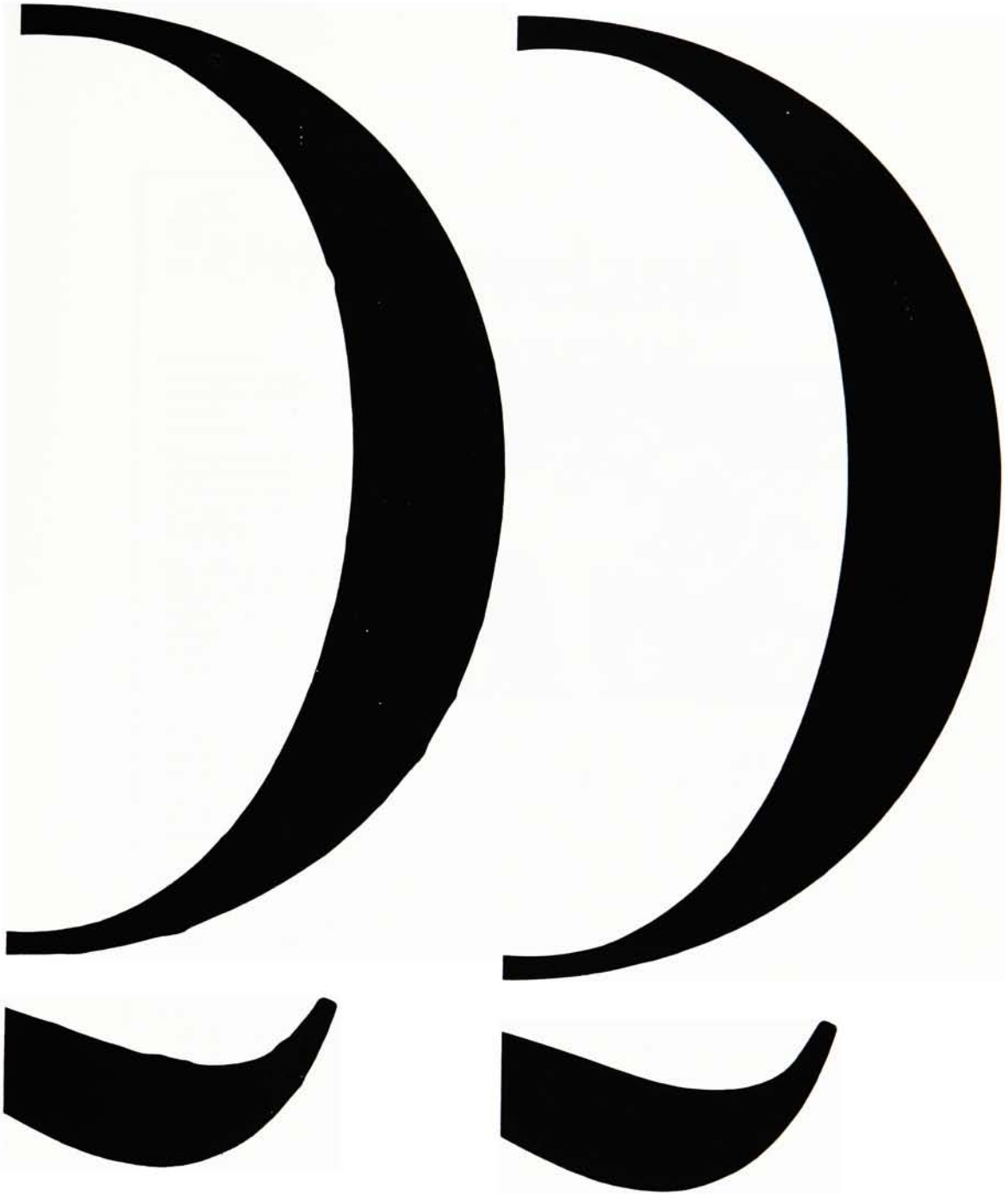



Figure 10

Half of letter Q before retouching (left) and
after retouching (right).

400%
38 Sec } F 11
10 BL } F 11

Cleveland Quartet



"Second to none. string quartet playing doesn't come better than this."
BOSTON GLOBE

"This was the kind of musical experience a listener may hope to have once or twice in a lifetime."
LONDON OBSERVER

"They united the combined virtues of craft and instinct, freedom and infallible brilliant technique - they moved me to tears."
LE FIGARO, Paris

Donald Weilerstem, Peter Salaff, violins Paul Katz, cello Atar Arad, viola

The Cleveland Quartet is internationally recognized as one of the great string quartets of our time. Many of their RCA releases have received Grammy nominations and "Best of the Year" awards from *Time* and *Stereo Review* magazines. Founded at the Marlboro Music Festival in 1969, the Cleveland Quartet has since toured the world extensively giving nearly 100 concerts annually. They have appeared at the White House for a presidential inaugural concert, on local and national television and

were the first classical artists ever to perform on the Grammy Awards telecast. Through the generosity of the Corcoran Gallery of Art in Washington, D.C., the Quartet plays on a rare set of Stradivarius instruments originally owned by Paganini. Dedicated teachers as well as performers, the members of the Cleveland Quartet are on the faculty of the Eastman School of Music and make their summer home at the Aspen Music Festival.

ON RCA RECORDS

Barber String Quartet Op. 11 (ARL1-1509) 458

Bethoven: The Complete Quartets (ARL 5-4486) Early Quartets (ARL 4-5010) Middle Quartets (ARL 4-5099) Late Quartets and the Grosse Fugue

Brahms: The Complete String Quartets (VCS-7102)

Brahms: Quintet in B minor for Clarinet (R. Stolzman, clarinet) (ARL1-0993)

Brahms: Sextets (P. Zukerman, viola; B. Greenhouse, cello) (ARL2-0054)

Dvořák: Quintet in A Major for Piano and Strings Op. 81 (E. Ax, piano) (ARL1-2240)

Haydn: Quartets Op. 64 No. 5, Lark, and Op. 76 No. 2, Quinon (ARL1-1409)

Ives: Quartet No. 2, Scherzo for String Quartet (ARL1-1509)

Mozart: Adagio and Fugue in C minor, K. 540; Schubert: Quartet in D minor, "Death and the Maiden," Op. Posth. (ARL1-0483)

Schubert: Octet in F Major for Strings and Winds, Op. 166 (with members of the Tuckwell Wind Quintet) (ARL1-1047)

Mendelssohn: Octet in F flat Major, Op. 20 (with the Tokyo String Quartet); Variations and Scherzo for String Quartet (ARL1-2542)

ON PHILIPS RECORDS

Schubert: Quintet in A Major, Op. 114; Trout (A. Brendel, piano); J. Vandenberg, bass) (0500442)

ICM ICM ARTISTS LTD. 40 WEST 57TH STREET
NEW YORK, NY 10019 212 556-5600
SHELDON GOLD, President
A MEMBER OF THE Josephson TALENT AGENCY GROUP

Figure 11

Flyer with photograph that was used for halftones in the Members panel.

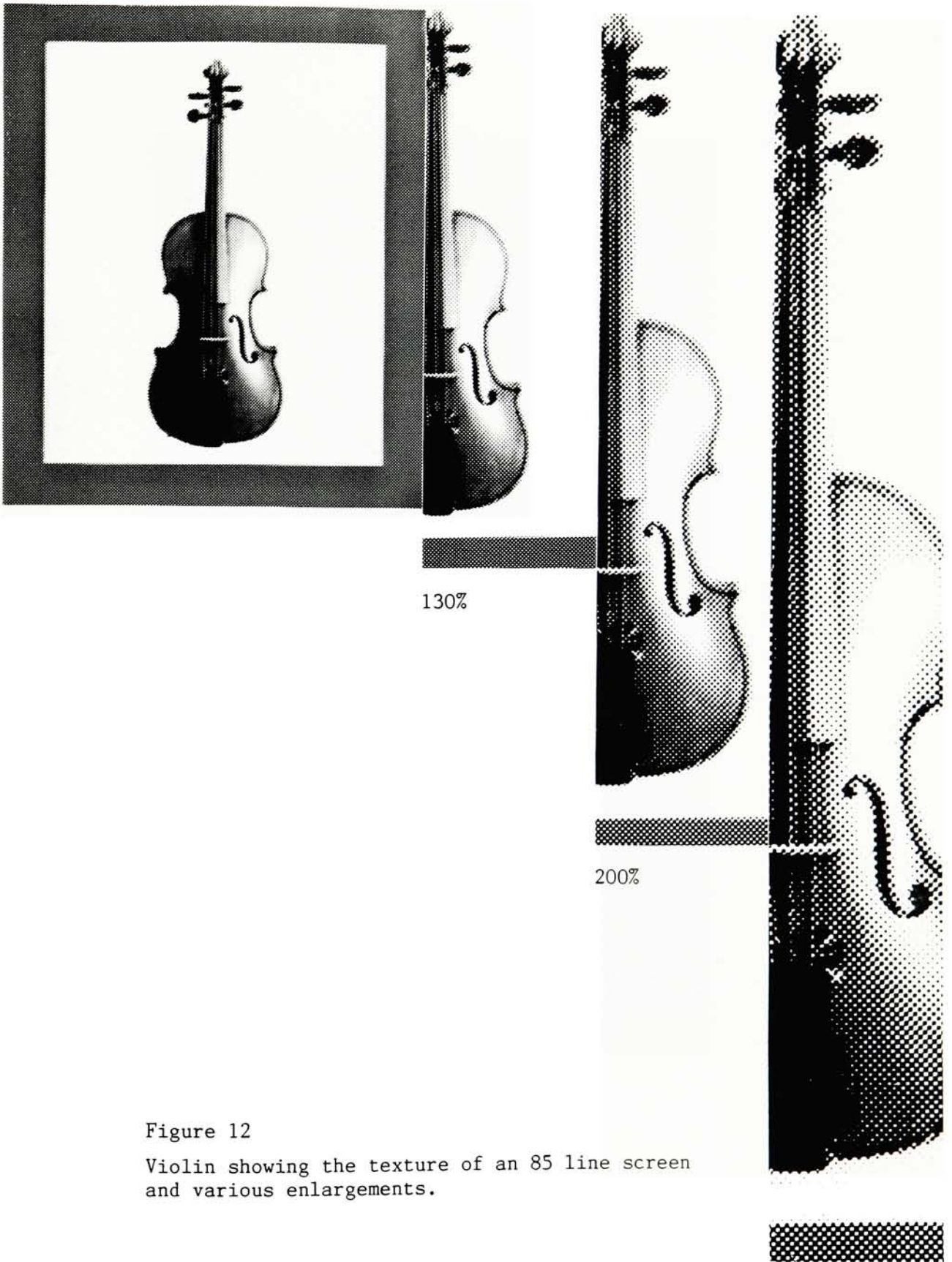


Figure 12

Violin showing the texture of an 85 line screen and various enlargements.

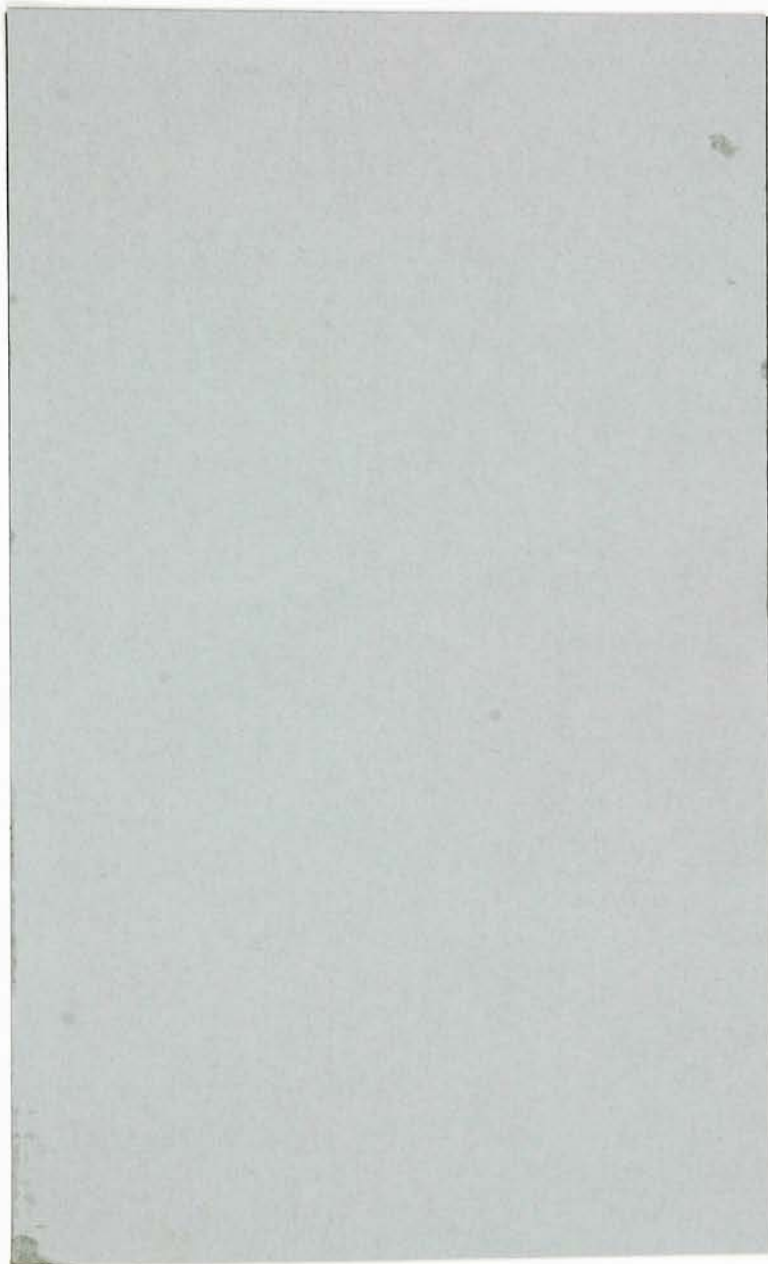
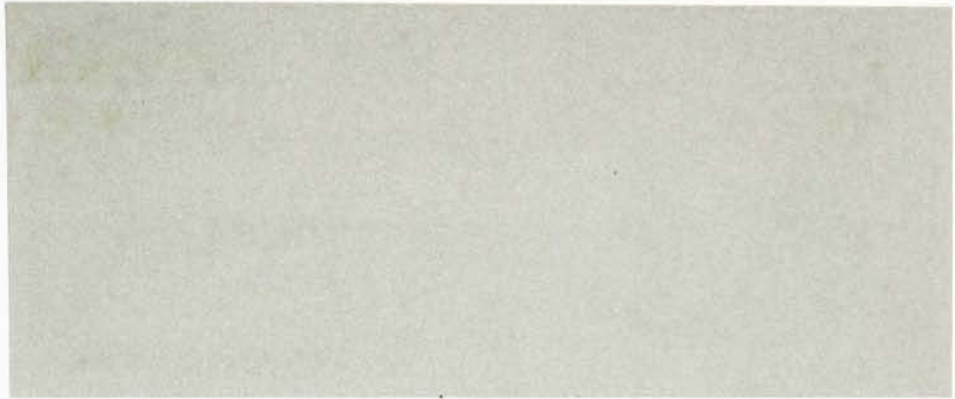


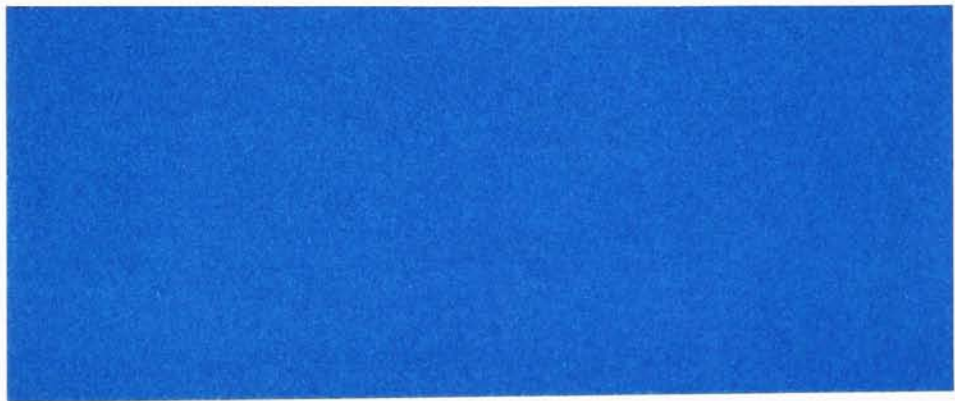
Figure 13

Paper sample: Simpson Teton Sage 80lb. cover

Pantone 422U



Pantone 307U



Pantone 154U

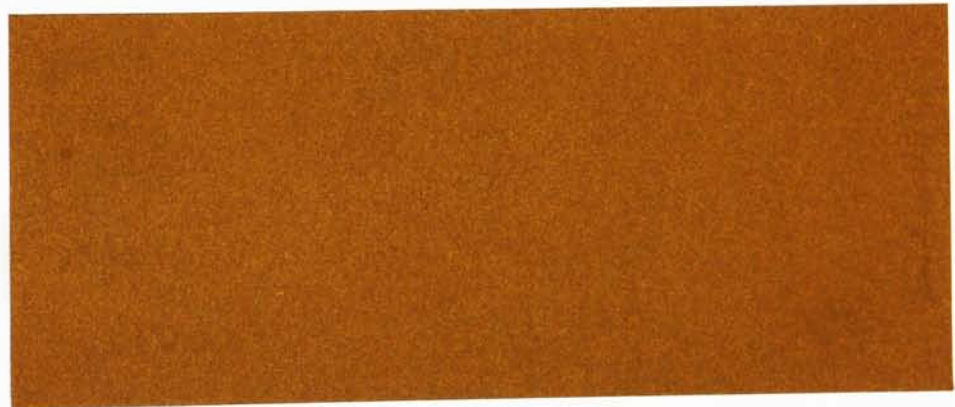


Figure 14
Pantone paper samples.



Figure 15
 Photograph of finished posters.