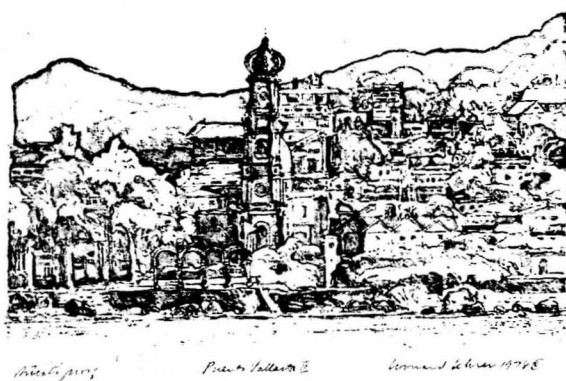


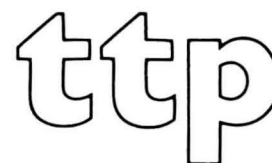
ttp

THE TAMARIND PAPERS

Technical, Critical and Historical Studies on the Art of the Lithograph



Volume III, Number 1
Autumn 1979



THE TAMARIND PAPERS

Technical, Critical and Historical Studies on the Art of the Lithograph

Editor: *Clinton Adams*

Contributing Editor: *John Sommers*

Editorial Board: *Richard Field, Jules Heller,*

Lynton R. Kistler, and Peter Morse

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COVER:



Leonard Lehrer. *Puerto Vallarta II*.
1978. 240 × 337 mm. (sheet).

Leonard Lehrer has demonstrated his mastery of tusche wash techniques in a remarkable series of lithographs made since 1971 at Tamarind Institute, in San Antonio, and in Tempe, Arizona, many of them created in collaboration with Tamarind Master Printer Wayne Kimball. Daniel Britton's article (page 25) describes a workshop conducted in February, 1978, during which Lehrer drew his lithograph, *View of Warsaw*, subsequently processed and printed in an edition of 106 impressions.

Lehrer, who is presently chairman of the department of art at Arizona State University, formerly taught at the Philadelphia College of Art, the University of New Mexico, and the University of Texas, San Antonio. His work has been seen throughout the country in more than twenty one-man exhibitions and is included in the collections of many leading museums, among them the Museum of Modern Art, New York; the Philadelphia Museum of Art; and the National Gallery of Art, Washington.

Health and Safety in Printmaking

This excellent manual for printmakers (reviewed in *TTP*, Vol. 2, No. 2, Spring 1979) is once again in print. A small service charge will now be made to cover the cost of printing and handling. The price of the manual is \$2.00 (Can.) per copy; quantity discounts are given as follows: 10 or more copies, \$1.85 (Can.) per copy; 100 or more copies, \$1.75 (Can.) per copy. Orders should be sent to **Alberta Government Services, Publications & Statutes, 11510 Kingsway Avenue, Edmonton, Alberta T5G 2J6.**

Survey of Instruction

The survey of lithographic instruction in American art schools and university art departments originally scheduled for publication in this issue will appear instead in the Spring issue, 1980.

EDITORIAL

A Sense of Déjà Vu

*In 1891 the New York Etching Club held an exhibition at the National Academy of Design. The catalogue essay, written by James D. Smillie, reflected upon the problems encountered by the art at that time. As one reads the article by Joshua Kind, "The Corruption of Norman Rockwell," published in *TTP*, Spring 1979, and the replies by Jack Solomon, Jr., and Mel Hunter in this issue, as well as Mr. Kind's further remarks, there is a sense of déjà vu: by the dictionary definition, "something overly or unpleasantly familiar."*

Below is a paraphrase of Mr. Smillie's essay, written by Sylvan Cole, Jr. Mr. Cole has condensed the text and has substituted the word "printmaking" for "etching," but has in no way changed the spirit of Mr. Smillie's original remarks.

As Mr. Kind observes: Ask not for whom the faux-graphique tolls, it tolls for thee. — C. A.

THE ART OF PRINTMAKING has experienced all of the fluctuations that might be expected to result from a mercurial temperament and a meager knowledge of art matters.

Printmaking is now being tested in the very house of her friends, or, at least, of those professing to be her friends. She is suffering from a popularity so wide and so fleshly in its attributes that in its embrace the breath of life is nearly pressed out of her. She is the winner of a victory so disastrous that some sorrowing friends are humbly prayerful for the healthy reaction of a wholesome defeat.

In this country, not many years ago, an original print was a thing almost unknown commercially. We have changed all that now. Nearly every gallery and department store has its enticing display of original prints. To supply the art-craving of a people insatiable with the greed of a new appetite, presses with relays of men, working night and day, are laboring to supply the demands of our great cities, and carloads—literally, carloads—of signed prints are being sent to plains and prairies, Rocky Mountain homes and far Pacific slopes. What a brave change from the apathetic ignorance of a few years ago! In contemplating it the old-time friend of the art of printmaking stands aghast.

It is obvious the public will have to be educated. Collectors will soon learn the difference between manufacture and art, and will seek that pleasing excitement of the artistic sense, or gratification of technical knowledge, that is to be found only in such works as cannot be cheapened by sharp business competition in the art market. They will learn that the best works must be sought for with an eye made keen by both love and knowledge, and time will teach them that such possessions will grow ever sweeter, always yielding a dividend of enjoyment far outweighing in pure gratification the gold of investments.

As to the future of printmaking, it would be hardly wise to hazard a prophecy, but little is risked upon a modest belief

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VIGNETTE:

LITHOGRAPH CITY, IOWA

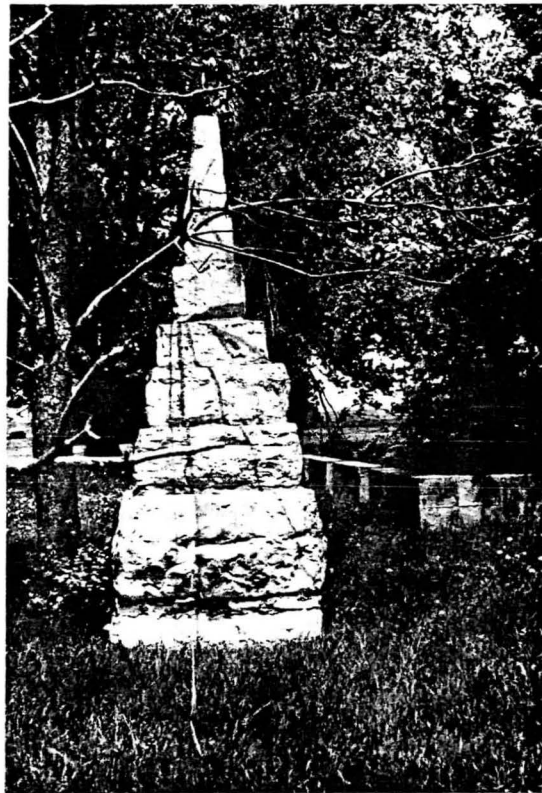
by Lawn Griffiths

A CRUMBLING BUT STRAIGHT sketch of wide sidewalks runs for 20 yards along a stately row of leafy elms in a grassy cow pasture in northern Floyd County, Iowa. Foundations for now-gone buildings serve like square flower pots, holding volunteer trees and weeds. Here and there are rusty chunks of iron, pieces of white stone, and rotting signs of a human settlement. Once it was called Lithograph City, later named Devonia, and then, when it failed, dubbed "Fizzal Town."

By any name, the place today is a ghost town, the remains of a dream which was dashed by modern technology and bad timing. It was shortly after 1900 that a young geologist, Clement Webster, came upon a deposit of finely textured limestone in rural, northern Iowa. His geologist's insight told him that the rock had special qualities. He took samples home and launched his own laboratory tests; in the end he became convinced that the stone was of the same kind as that believed to exist only in Bavaria, and hence was suitable for use in lithography.

Webster saw in an American source of lithographic limestone a great opportunity. He founded a company, the Interstate Investment and Development Company, with himself as president. The land was purchased, 240 acres at first, then another 160, and on June 10, 1905, Lithograph City was platted (Lithograph City was reportedly surveyed by G. H. Elliot in May, 1906; the fact that this survey comes almost a year after the report of platting in 1905 suggests an error in the town's available history). The plat shows six avenues running north and south, and four streets running east and west: Main, Lithograph, Rock and Brick streets.

Phil Nauman, a Floyd County farmer who now owns a farm just north of the ghost town, remembers that when he was a boy in "about 1907," he went with his parents to the budding town. "They had a big tent and speakers and sold pieces of shares. They had a big crowd." But despite the push to sell stock and raise money, the company was unable to get a financial start until the spring of 1913, when one account said that "everything was in readiness for a forward movement of the enterprise." By then two houses had actually been built and Webster is said to have expected 100 more to go up. About \$50,000 worth of quarrying and



At what was once the corner of 3rd Avenue and Lithograph Street stands an obelisk made of lithograph stone.

stone processing machinery was ordered that year. To haul away the stone, Webster sought a spur track from the main line of the Milwaukee Railroad. That was never to come. Instead, when quarrying began, the stone was taken to a farm-tractor powered "train" which pulled steel wagons to the town of Orchard. The same vehicles transported lumber and building materials to Lithograph City for construction of houses and businesses. By 1915, the new community is said to have had 15 houses, a hotel, a blacksmith shop, a lumber yard, a stone polishing plant, a museum, and a general store and dance hall. Recalling the town he knew then, Nauman stresses that it did not have a church. "If they'd have had a church at the time it started, it might have clicked."

When the war began in 1914 the importation of lithographic limestone from Europe came to an abrupt stop, thus giving the Iowa town what seemed to be a timely break, but the optimism was shortlived. Already in those years the commercial lithographic industry was abandoning stone and adopting offset printing. In addition, among old-time lithographic printers, there was a suspicion of "domestic" limestone to be overcome.

The town's financial backers broke into discord. One historical account said, "Many town lots were sold at first and a real boom started,

(continued on page 14)

Lawn Griffiths is Assistant State Editor of the Waterloo Courier, Waterloo, Iowa.

Jean Charlot, draws on a stone for *On the Go*, his last stone lithograph, at the University of Hawaii, February, 1978.



THE LITHOGRAPHIC INNOVATIONS OF JEAN CHARLOT by Peter Morse

JEAN CHARLOT died on March 20, 1979, at the age of 81. His three sons wrapped him in old Hawaiian tapa cloth and a Fijian mat and buried him in the earth of his beloved Hawaii. Now that he is gone, it is time to examine his life's work in lithography. His contributions to the art offer a whole new range of possibilities to artists of this generation.

Charlot made 568 lithographs between 1918 and 1978, over half of them in more than one color. His innovations are in three distinct areas: 1. In the *visual* area, there is his technique of breaking down a color picture completely into discrete colors and then drawing the colors on lithographic plates or stones to produce a finished color-blend print. 2. In the *technical* area, there is his employment of the offset lithographic process for new artistic ends. 3. In what might be called the *social* area, there is his use of original lithographs for purposes not usually thought to be artistic.

One of Charlot's earliest memories from his childhood in France was of a neighbor who was a commercial printer. "He would bring over color prints," recalled the artist, "and show us children the progressives: yellow, red, blue, and black on top. . . . It was a first visual ex-

perience with color separations." Later in New York, his friend, Ben Shahn, told him how he had drawn color plates by eye for chromolithograph posters. (These commercial posters preceded Shahn's catalogued "artistic" posters.) Up to this point (1933), Charlot had never made a color lithograph. He became intrigued with the idea of making original lithographs with fully blended colors printed from hand-drawn plates. On a train from New York to California (to visit the young lady who later became his wife), he drew six small sketches in black pencil in his notebook. Each sketch represented a different color, a different component of a total image, overlapping in many areas to produce secondary and tertiary colors. He had discovered the ability to make such color separations entirely in his mind. He conceived an ambitious plan to publish a whole repertory of images in full polychrome.

In Los Angeles, he met the perfect collaborator for such a project: the printer, Lynton R. Kistler. Lynton, who was then working in his father's large offset printing plant, was challenged by Charlot's concept of making pictures from color plates done by hand rather than photomechanical separation. The elder

Peter Morse is the author of *Jean Charlot's Prints, Honolulu, 1976*, and other books and articles on prints and printmaking.

Kistler, on the other hand, was thoroughly skeptical. To prove their point, Lynton and Charlot made a trial print in seven colors. Starting from his sketches done on the train, Charlot drew all seven plates in a single day. All of them were drawn in black litho crayon; the colors still existed only in Charlot's mind. None of the plates held a complete artistic image, just fragments of the whole. The method has some resemblance to fresco technique, which Charlot knew well from his work in Mexico, wherein colors are built up one at a time on a plastered wall. Only when the seven plates were printed together, on a small offset press, did the colors lock together to produce a finished picture. (Charlot's later practice was to draw the first four or five plates, study the printed combination, and then draw additional "corrective" plates to complete the color image.)

This little Mexican *Malinche* was a revolutionary lithograph in several important respects. First, it demonstrated that an artist could indeed make color separations in his head that would produce, through overprinting, a full chromatic range in the finished print. Few other artists have ever tried it. Second, it showed that an artist need not rely on a single dominant plate to carry his basic composition. In almost all color lithographs, from Manet onward, there is one fundamental plate that carries a self-sufficient image and is then highlighted with local color. In the case of this *Malinche*, and many other prints, Charlot made a line key plate to register his colors as he drew then—but the key plate does not appear in the final print. No single color dominates, and none contains a meaningful complete image. Third, the resulting color blends are made possible primarily through the medium of offset lithography. The transparency of offset inks permits even the bottom color in a stack of seven to penetrate through the layers and strike the eye, in combination with the other colors. "Maybe it is original," said the artist quietly. "I don't think there is an easy precedent, shall we say, for the way I apply the idea of color blends."

There is nothing very arcane about Charlot's color separation method. Another artist might start, as Charlot did, by studying photomechanical color progressives, to see how the camera splits a picture into primary colors that are recombined on the paper. He can then undertake the mental exercise of visualizing other, secondary colors for his individual plates and their possible combinations. He should then be prepared to spend time and effort in making experimental lithographs, to test out his mental color constructions on paper. The resulting color-blend lithographs are quite dif-

ferent from either the usual artistic lithograph or from photomechanical reproductions.

Charlot's major technical contribution to lithography lies in his skillful use of offset printing to make original prints. More than two-thirds of his lithographs were printed offset. He seldom did his own printing, but he took great pains to learn the details of the process, so that he could use it to best advantage. He preferred to work in close collaboration with his printer—regularly saying "we" instead of "I" when speaking of making lithographs. His two main partners in offset lithography were Lynton Kistler and Albert Carman. Charlot made prints with Kistler (on stone as well as offset) for 45 years. His work with Carman was briefer but more concentrated. In New York, from 1935 to 1941, the two men were in almost daily contact. Together they worked out a number of innovative procedures in offset lithography. One process earned them a U.S. patent (but no monetary reward).

Kistler was already an established commercial printer when he began working with artists. He was able to teach Charlot the special characteristics of offset printing, which Charlot then translated into work drawn directly on the plates. The success of the little *Malinche* soon led to the thirty-two color lithographs that make up Charlot's *Picture Book* of 1933. This book and its successor, *Picture Book II*, of forty years later, demonstrate many of the advantages that the offset process offers to the creative artist.



Jean Charlot. *Malinche*, 1933. 156 × 206 mm. [M. 116].

Colors can be printed with greater transparency, allowing unique color combinations. Precise registration of colors on the paper is much easier to achieve than in stone lithography. Kistler has printed one offset lithograph (not Charlot's) with no less than twenty-five distinct colors in tight registration. The prints of an offset edition can be of remarkably uniform quality. Charlot's *Hawaiian Swimmer* of 1972, in seven colors, was printed in a total edition of seven thousand. The first print is literally indistinguishable from the last. That cannot be done on stone. With offset, the artist has the obvious advantage of drawing his image in the same direction as it will be printed. In stone lithography, he is obliged to handle a right-to-left reversal between the drawing and the final print. Another benefit of offset is that it preserves the texture of the paper, instead of smahing it flat as stone printing can do. An artist can make positive use of such texture. Kistler once said with a smile that he could print lithographs on sandpaper, though I don't believe he ever has.

Back in New York in 1934, Charlot got the use of a small "Multilith" offset press, scarcely more than a glorified mimeograph machine. His first trial efforts look very primitive beside the technical virtuosity of the Kistler offset prints. Working alone at first, he attempted to push the small press beyond its limits. He even tried to register colors with no provision for it on the press. In March 1935, he had the idea of inking the roller with different colors, side-by-side. Is this the first use of a rainbow roll? Soon afterward, Charlot met Albert Carman, and the two men began to work with a better Multilith press, one that could register colors. On this modest machine they were soon producing color lithographs that rivalled those pulled from stone. As mentioned, they also developed and patented a method that vastly simplifies the registration of the artist's drawn colors. To begin, one color is drawn on a plate and then printed. The drawing is then eradicated just to the point where a non-printing ghost image remains on the plate. The artist then draws his second color in exact register with the ghost image. This is etched, printed, and then removed to the point of another ghost image, and so forth for as many colors as are wanted. The procedure is risky, of course, for it gives no opportunity to return and correct an earlier color. But it does greatly simplify the cumbersome procedure of key plates, line tracings, acetate sheets, or other methods used to draw color in register. The method can also be used for stone lithographs.

Direct lithography, from stones or plates, has its own advantages, just as offset does. There

need be no competition between the two processes. Charlot fully understood these differences and planned his lithographic drawings to take advantage of the uniqueness of each. During the same period he was making offset lithographs with Carman, Charlot was also making stone lithographs with Emilio Amero and George Miller—and also on zinc plates that were mailed to Kistler in Los Angeles for direct printing. He became indeed so comfortable with lithography that when he was asked to illustrate a magazine article in September 1936, he drew the illustrations on offset plates instead of paper. He printed a few proofs and sent a set to the magazine for reproduction and still kept a set for himself.

These illustrations lead to the third innovative aspect of Charlot's work—his use of lithography for many ends other than pure art. The idea of original prints as something useful, rather than just a luxury, has almost been lost in the 20th century. In earlier centuries it was the norm. "Do we forget," Charlot asked, "that, once upon a time, art was an indispensable accessory of everyone's life, and especially the graphic arts?" This is no place for a polemic; I have done that elsewhere (Morse: *Popular Art*, Santa Barbara, 1978). The point is that Charlot was always willing, even eager, to use hand-drawn lithographs for what we now consider commercial purposes. Of his 568 lithographs, only about 250 are self-standing works of art—works created for no other purpose than their own intrinsic beauty, and in the signed limited editions that distinguish the modern lithograph. The rest were all made to serve some specific purpose. Many of them, such as the illustrations for the Limited Editions Club's *Carmen* of 1941, are of great complexity and originality. But many are simple, even trivial images. Original Charlot prints may be found as posters, exhibition announcements, Christmas cards, trade book illustrations, covers, and jackets, as devotional images, school brochures, membership certificates, theater programs, letterheads, placecards, and bookplates.

Where another artist would make a drawing and hand it to a photoengraver, Charlot would draw on a grained plate and hand it to a printer, ready to print. The originality of the work, in contemporary terms, was not particularly important; the sharpness and impact of the hand-drawn image was. A friend once told me that I made heavy weather of the superiority of original techniques over photomechanical ones. He cited the cover of a little book of mine as an example of how good commercial processes could be. I was delighted to tell him that the cover he

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S. Dale Phillips, whose reminiscence of Bolton Brown was published in the Spring 1979 issue of TTP, worked with charcoal lithographic crayons in the 1930s. Here he describes the simple procedure for making such crayons. Jeffrey Sippel then comments on the tests of such crayons conducted at Tamarind.

LITHOGRAPHIC CHARCOAL

by S. Dale Phillips

THE GOAL IN MAKING lithographic charcoal crayons is to produce an exact visual match between the drawing and the print. Both the artist and the printer strive for this result. The crayon must also satisfy the physical requirements of drawing. Important among the qualities of good crayons are smoothness, a pleasant feel when drawing, an absence of stickiness, and good beam strength, so that the stick will not break or crumble in the hand. A combination of all of these desirable characteristics in a single crayon has been achieved through saturation of charcoal sticks in hot, greasy materials, so that they then become capable of producing a lithographic image on stones or plates. Wax crayons must contain black pigment and other ingredients to develop a suitable beam. Charcoal sticks already contain a natural black pigment and have good strength.

Lithographic charcoal crayons are insoluble in water. Wax crayons can be made in either of two basically different varieties, i.e., soluble or insoluble in water. The artist who wishes to make his own charcoal crayons will find that those which work well on stones or plates are not ideal for drawing on paper. The saturants that impregnate the charcoal prevent a good deposit of dark pigment on a paper surface, and their marks cannot be cleanly erased, as can be done with pure charcoal. On the other hand, the charcoal crayons have a certain affinity for grained stones or metal plates, once the saturant is absorbed. They are excellent for lines and tones made of a series of closely knit lines, or for a broad sweep of tones made by drawing with the side of the crayon against the grained surface.

The information necessary to make three different kinds of charcoal crayons is given below.¹ These were first used by professional artists and students with whom I worked in Iowa beginning in 1934.²



Above:
Jean Charlot.
Lavendera Alone,
1937. 404 ×
257 mm. [M. 390].

Left: Detail,
actual size,
showing character
of charcoal
drawing.

Procedures and Comments

1. To minimize fire hazard, the source of heat should be electric. The saturants should be heated outdoors or under an exhaust fan so as to avoid the dangers of obnoxious smoke and fumes which will be present at about 275°F.

2. A metal pan about 7 by 3½ inches, 2 inches deep, will process 36 sticks of charcoal. Twenty ounces of saturant will cover 36 sticks.³

3. First, heat the stearic acid in the metal pan to about 275°F. or until clear. Scrape or shave the soap into fine particles so that it can be added gradually to the hot saturant while stirring. Add the particles of castile soap gradually, stirring constantly until again clear. Add the beeswax while continuing to stir.

4. Raise the temperature to 300° and add the 36 sticks of charcoal all at one time. Retain the 300° temperature. White foaming bubbles will persist until the charcoal sinks to the bottom, which will take about 14 minutes. Continue heating for 45 minutes after the charcoal sinks, then let the mixture cool to about 250°.

5. Any sticks of charcoal that are still floating should be discarded since they may be defective by reason of brittle spots or voids.

(continued on page 30)

GRIT-TONE LITHOGRAPHY

by John Sommers

This article is based on technical information supplied by Clarence McGrath, a lithographer who lives in Baja California, Mexico. McGrath, who has been working in the medium for some years, has conducted extensive experimentation in the use of "grit-tone lithography." Now, in letters to TTP, he has consented to share his findings with others.

ARTISTS WHO ARE NEW to lithography and who make use of tonal drawing are often surprised by the changed contrast that develops in a work when it first appears on a white sheet of paper. This change comes about, of course, when the underlying tone provided by the color of a stone or plate is replaced by that of the paper. The values of the original drawing, drawn in black against the value of the stone, are greatly modified by the extreme luminosity of the paper. This is often a shock, even when the artist has been forewarned. Only after such experience does the artist learn to consider the tonal value of the printing paper while making the drawing.

Over the years, many approaches have been developed to this problem. Printing on toned paper, similar in value to the stone or plate, is one obvious solution. Grit-tone lithography provides an alternative, as described by Clarence McGrath: "The object of adding the grit-tone is exactly to replace the value and overall evenness of tone of the stone with an equal value, an equally even tone in the print."

McGrath's experimentation has been on onyx. Given Tamarind's experience in use of marble, I can foresee no problem in application of his procedure to regular lithographic limestones. I would without hesitation use the grit-tone procedures on aluminum and zinc as well, although these have not yet been tested here.

Basically, McGrath's grit-tone method is based on experience with techniques used in lithographic line engraving. These, coupled

with the engraving and lacquering procedures suggested by Wayne Kimball (TTP, Vol. 1, No. 2, p. 24), have served well on both metals.¹

The basic procedure in creating a grit-tone is to provide a thin, even gum mask on the surface of the printing element and then to break through this mask by running it through the press with a grit-covered sheet laid face down over the areas that are to receive a tone. The grit "punches" tiny, randomly placed holes in the gum mask. These holes, cleaned and given a lacquer or asphaltum base, will then roll up with the image. Counteretching is not necessary and only minimal processing is required to produce a stable printing surface.

McGrath's grit-tone procedure is as follows:

Preparation of a grit sheet

1. Assemble these materials:
 - a sheet of matte, textured-surface polyester (matte acetate may also be used but it has a softer, more penetrable surface).
 - clear, two-part, slow-setting epoxy.
 - carborundum, ff or coarser (fff makes dots so tiny that problems may be encountered unless the printer is alert).
 - a sheet of Mylar or acetate larger than the grit-sheet in preparation.
 - a hard surfaced roller larger than the grit sheet.
 - clean rags, masking tape, and a soft brush.
2. Attach a sheet of matte surfaced polyester to a flat, smooth surface by applying masking tape around its edges. As the tape is applied pull the sheet taut and wrinkle free. The textured surface, face up, aids in laying down a smooth, even coating of epoxy and grit.
3. Squeeze equal parts of the two components of the epoxy compound on the polyester surface; mix and spread around with a flexible knife or squeegee. A teaspoonful will cover a large area, and slow-setting epoxy provides adequate working time (five minute epoxy may be used if one is fast and skilled in applying it).
4. Make a pad with a cloth and buff down the epoxy to a thin, even layer. The epoxy will not be easy to move around, but with effort it will buff out smoothly. Unevenness can be seen in oblique light; it should be rubbed until overcome.
5. Sprinkle the grit over the entire sheet. Tap the surface to help even it out; gently shake off the excess.
6. Lay a clean sheet of Mylar on top of the lightly adhered grit and roll it down with the large roller, pressing the grit deeply into the epoxy cement. Do not roll directly on the grit, as ridges and patterns may form which, although they may be nearly invisible on the grit sheet, will appear in the print.

7. After an overnight curing, lightly brush the grit surface with a soft brush to dislodge particles that are not fully adhered. The sheet is now ready for use.²

By manufacturer's standards, these particles are not well adhered, but because the pressure is downward when the grit sheet is pressed on the stone, the strength obtained is sufficient. As will be seen in the procedures that follow, this light adherence is usually desirable.

Creating a grit-tone on a printing element

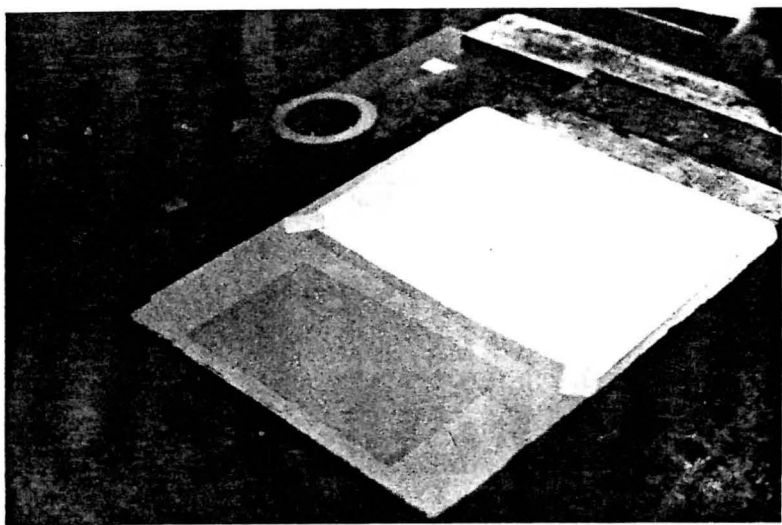
1. The drawing on the printing element is executed with whatever materials the artist wishes. McGrath comments that his "characteristic materials are light tusche washes and number 4 and 5 crayons. The ff and fff grit sheets are the most compatible with his image making intentions."

The drawing is given a first etch. Following a rest period, the stone is positioned on the press as for printing. It is then processed according to the wash out procedures described in TTP (Vol. 2, No. 1, pp. 13-15). After drying, apply talc and buff it in. Deletions (if any) should be made chemically to preserve the grain, and the surface should be cleaned with gum arabic and magnesium carbonate, followed by water. The surface is then dried and the stone again processed following the TTP wash out procedure through step 3. It is now ready to receive the grit-tone.³

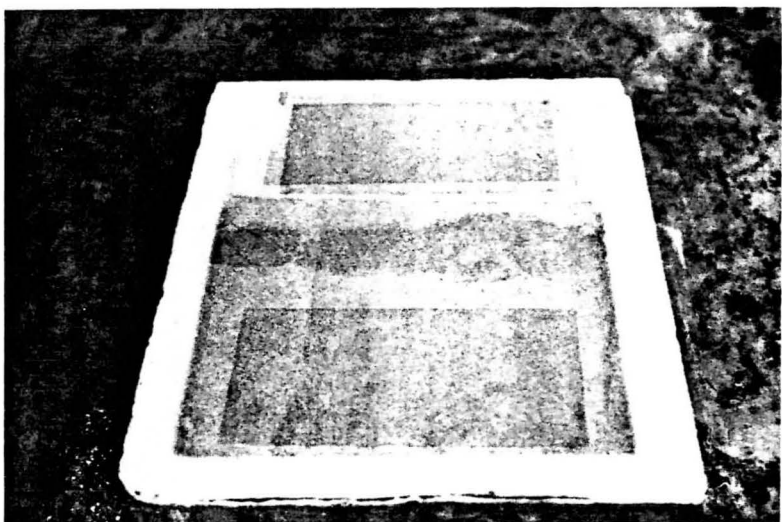
2. Apply the grit-tone sheet, rough side down, and attach it at the top with masking tape. If registration pins have been used, the grit sheet may be punched correspondingly. In this case masking tape is unnecessary as the pins will hold the sheet in place.⁴ Cover the grit sheet with a paper pad (two sheets of proofing paper), apply light to medium pressure and run the stone through the press. Remove the grit sheet and lightly brush the surface of the stone to remove the stone dust and any grit particles that may have come off the sheet. You will observe tiny dots in the image and non-image areas alike. Reposition the grit sheet, turning it 90°, re-tape, cover, and run it through the press. Uncover the stone, dust it again, reposition the grit sheet (another 90°), re-tape, cover, and run it through a third time. When the surface is dusted you will see an even tone of randomly placed dots. Any tendency toward a pattern is obliterated by the successive grit sheet applications in different positions. The dot size and character will be in relation to the pressure used as well as to the grit size. Heavy pressure will produce the largest dot possible, given the grit that is used, while light pressure will produce the smallest. Under a glass you will see



In Tamarind tests, grit-tone was applied both with extra fine sandpaper (Michigan Hard Wear No. 741) and a Mylar sheet made with epoxy and no. 1 quartz sand.



Above: After the first grit-tone application was rolled up, the stone was regummed and a new grit-tone sheet was attached for pressing. **Below:** Three applications of grit-tone have been completed in two areas of the stone. After each application the grit-tone was put into lacquer before roll-up.





The overlapping values show the increased density of successive grit-tone applications.

that many of the larger grit particle dots, under light press pressure, have produced hollow, donut shapes and many dot sizes. If you did not attach the grit sheet firmly before running it through the press, it may have traveled, creating tiny scratch-shaped pits rather than round, punched holes.

3. Holes punched in margin areas, or in areas where pure whites are desired may be gummed out at this point. When the gum is dry, complete the wash out processing with steps 4 through 6, and after buffing in rosin (on stone), apply talc and the second etch. (Lacquer would be applied to aluminum plates prior to the asphaltum in step 4.)

4. It is important to take proofs at this point in order to determine whether the grit-tone is sufficiently well developed. After the second etch and an appropriate rest period proofs may be pulled. If all was correctly done and if judgment was good, the tone of the stone should be duplicated in the print. If the tone is lighter than desired, additional grit-tone may be added. After rolling up and applying talc, gum down the stone, buffing tightly, and wash out as before. Repeat steps 2 and 3 above. It should be remembered that with repeated pressings the grit sheet has become dulled; it will also have lost some particles. Such dullness and loss of particles will result in less tone added each time it passes through the press.

Variations in fabrication and use

PERHAPS IN CREATING a grit-tone you will want to move more rapidly from the fabrication of the grit sheet to its impression on a stone. You may want to involve the process of drawing in the fabrication of the grit sheet. Variations in approach and materials can provide this flexibility. The first of possible variations is simply to ignore the curing time of the epoxy, going directly ahead to impress it on the stone. In this case, more grit will be lost during each pressing than if the sheet were dry.

A second quick method is to substitute a spray-can adhesive (rubber cement) for epoxy.⁵ Such an adhesive can be sprayed on a sheet of newsprint that has been taped to a flat surface; grit can then be applied; and, when dry, it is possible to go directly to the press. Care should be taken in this method of application to check for an even distribution of the spray adhesive; the pattern in which the adhesive is sprayed must be controlled to achieve this. There is, of course, the possibility of deliberately spraying the glue in uneven patterns, either freehand or through a stencil, as a means of developing an image.

To even out the layer of spray adhesive on newsprint, first spray the anchored paper, then

wipe the glue evenly over and into the paper using a rag saturated with lacquer thinner.⁶ Grit should then be quickly applied, as the lacquer thinner will cause the adhesive to dry rapidly. It is suggested that when using coarse grit this may be the method of choice. The newsprint will provide better seating of such particles when it is pressed; the softness and penetrability of newsprint will serve to even out the greater variation of particle size encountered in the coarser grades of carborundum. A precaution should be observed: the texture of the paper will tend to show when thin adhesive layers and fine grit are used.

Grit-tone drawing

The grit may be applied with a brush directly to an anchored acetate or polyester sheet as freehand drawing or through use of a key drawing placed beneath the transparent sheet. Such drawing can be further worked by displacing grit with a stiffer dry brush or a needle, or by rubbing the surface when dry. The grit drawing may be further manipulated by spattering water into the dry grit, patterns may be lifted by pressing the drawing against a sticky surface, or the drawing may be reduced using a brush saturated with water or lacquer thinner. If the initial drawing is unsatisfactory, the acetate may be cleaned and the process begun again.

Such "grit-shape" drawings may be reversed in direction by placing a polyester or acetate sheet over the drawing and running it through the press. The polyester will pick up less grit from the underlying sheet than will the acetate. Successive sheets laid over the original will pick up ever diminishing impressions. All the sheets created in this manner can be applied to a gummed stone surface, with or without a pre-existing image, in any order, each with further hand-applied modification if desired.

Another approach involves grit drawing applied directly to the gum-masked stone, either dry or in a mix with lacquer thinner. Pressed and brushed off, it can be reapplied and pressed again. When using grit directly on stone, several layers of paper padding are needed.

Grit-tone deletions

The possible applications of grit-tone processes are all but endless. Their use in making deletions in an image which is too dark overall seems so simple in concept as to raise the old question: why didn't anyone think of this before? Two methods are suggested. The first, with the image in a lacquer base, may be risky on metal; the second, with the image in ink, is safe on all elements, but will proceed more slowly because of a layer of ink between the grit sheet and the printing element.

Method 1 (image in lacquer "C" base and ink):⁸

1. Apply fresh gum to the image bearing element and buff it out smoothly.
2. Wash out the ink with lithotine, leaving the stone clean and dry.
3. Press on the grit-tone sheet, dust the surface, and reapply as many times as necessary to achieve the desired lightening of the image.
4. Desensitize the "punched" holes by applying gum arabic to the entire surface for about one minute.
5. Wash off with water and ink the image, taking care not to dry roll (the newly punched holes are still sensitive and might easily fill in).
6. Dry the stone, apply rosin and talc, and etch for thorough desensitization. If in proofing the image remains too dark, the entire process may be repeated.

Method 2 (image in asphaltum base only, inked, with no lacquer present):

1. Prepare a grit sheet with well-anchored particles, using epoxy, not spray adhesive (use of shellac might also be desirable; see footnote 2).
2. Roll up the image in fresh ink.
3. Apply rosin and talc (talc only on metal) and buff in well.
4. Register the grit sheet on the element, attach it, and run it through the press. Dust the surface, clean any ink off the grit sheet with lacquer thinner and re-press, shifting the registration slightly.⁹ Repeat as many times as is necessary to lighten the image to the desired degree.
5. Etch for desensitization, taking into account the character of the image.
6. After 15 or 20 minutes, re-gum the stone, wash out, roll up and proof.

The process can be repeated if additional image deletion is desired. If grit deletion were desired in some areas but not in others, a grit drawing would be required. For evenness of grit distribution in shaped areas, a workable approach is to spray adhesive through a prepared stencil. When making grit deletions only within selected shapes, careful registration is necessary. Registration pins should be used and several grit sheets prepared. Each of these would have random grit coverage; each could be used a single time rather than shifting and repunching a single sheet.

Final thoughts

Many further applications of grit processing techniques come to mind. Without discussing them in detail, one intriguing range of possibilities involves collage-like approaches to the making of images. Grit might be adhered to a

The possible applications of grit-tone processes are all but endless.

leaf, a piece of burlap, lace, or other textured fabric—indeed to any pressable material which, after application of grit, could be used to punch through a gum mask or an ink film. The possibilities suggest themselves. Grit might be applied to a freshly printed image on paper or mylar; this grit-covered image might then be placed against a new, gummed surface on another stone or plate, thus creating a second soft, somewhat fuzzy image. Through use of Mylar and grit-transfer procedures other creative approaches become possible, perhaps involving image transposition. It is obvious that once tried each of these procedures will suggest still other possibilities. One must only hope that the aesthetic dangers of technical mannerisms will be recognized. One recalls with dismay the repetitive use of similar processes in countless, boring soft-ground etchings during the 1940s and 50s—acres of lace and leaves and tarlatan.

1. See also TTP, Vol. 1, No. 1, pp. 1-4; Vol. 1, No. 4, pp. 41-42; and Vol. 1, No. 6, pp. 76-79.
2. Particles can when desired be more firmly adhered by spraying the prepared and dried grit surface with shellac, diluted with alcohol. With the grit sheet in a horizontal position, spray it evenly and allow it to dry. The bulk of the diluted shellac will flow to the base of each particle of grit and solidify there.
3. See TTP, Vol. 1, No. 5, pp. 60-61, and Vol. 2, No. 1, pp. 13-14.
4. See TTP, Vol. 1, No. 1, pp. 8-11.
5. McGrath recommends the use of "Anchor It Spray On Adhesive" from Rembrandt Graphic Arts. Other spray on adhesives cause excessive expansion and subsequent wrinkling of the newsprint.
6. If the adhesive is worked out over the edge of the paper, the paper edge will be anchored automatically. The paper will then dry tautly.
7. Direct drawing with grit on acetate or Mylar is dependent upon static electricity to hold the particles. A better anchoring of the particles will occur (with a consequent change in the appearance of brush strokes) if the grit is mixed with water or lacquer thinner as a brushing medium.
8. See TTP, Vol. 1, No. 3, p. 31.
9. As other solvents may attack the acetate, mineral spirits should be used to clean the ink from an acetate base.

EDITORIAL (continued from page 4)

that a small class of connoisseurs will grow whose educated tastes will find aesthetic food in the somewhat infrequent work of the few artists who shall make prints because they do so after the popular demand shall have ceased. Science will find ways of doing everything and of supplying all demands except the demand for brains. The training school is a severe one, but we are secure in the assurance that out of the turmoil and strife of schools and methods, of inventions, of mechanical and scientific processes, the best and the truly good will survive. □

**Sylvan Cole, Jr.,
is President
and Director
of Associated
American Artists,
New York.**

LITHOGRAPH CITY (continued from page 5)

but litigation between members of the company has hindered development of the embryo city." Operations at the quarry came to a halt. It was even called a mere "promotion scheme," and there were rumors and accusations that directors of the company had embezzled its funds.

So it all collapsed. A new company was formed to produce crushed rock and related products. It issued new shares of stock, operating under the name, "The Devonian Products Company." Understandably, the loss of a market for stone prompted a change in the name of the town from Lithograph City to Devonian, but the change in name brought no change in the town's ill fortune. The new company failed, just as the first one had. The machinery from the rock plant was sold as junk iron. Efforts to establish a post office failed. Stores closed and families moved away. The houses and buildings were to move away too. Phil Nauman says that it became almost a custom that when farm houses burned in the area, farmers would buy a house in Lithograph City.

The building that was once the company's museum, operated by Webster, now serves as a plumbing shop in Orchard. Just to the southwest of its former location in Lithograph City, at what was once the corner of 3rd Avenue and Lithograph Street, stands an obelisk of lithograph stone. It is all that is left on the site except for a single building occupied by a hired hand of the farmer who now owns the land.

Mrs. William Stonecypher, who lives in rural Floyd County, recalls that about three families stayed in dying Devonian until the 1930s. She most vividly remembers the dances in the upstairs of the store which attracted sizeable crowds of persons who stomped to such musical groups as the Holtz Boys from Rudd, banjo and violin.

The sounds of a banjo, cash register and of stone being cut have long faded. A half century later Devonian is like the fields around it, given over to pasture and corn. Cattle graze around sidewalks and cellar holes. They chew on grass at the edges of pieces of peculiar white stone which would seem to polish up to a fine smoothness. □

Mr. Griffith's article is based on his feature story, "Fizzal Town," published June 16, 1974, in the *Waterloo Courier*.

AN ANSWER TO JOSHUA KIND

by Jack Solomon, Jr.

BECAUSE OF THE NATURE OF LANGUAGE, it generally takes more words to respond to accusations than to make them. I originally prepared a two-part article in response to Joshua Kind. Because of space limitations, I am delivering for publication only what is essentially Part I of my essay. In it only ten of Kind's alleged "corruptions" can be rebutted. I begin:

Alleged "Corruption" 1: To quote Kind: "All, no exceptions, all, every Rockwell 'print' ever made or sold is, to use our own coinage, *FAUX-GRAPHIQUE*. That is these prints are all made by photographic reproduction from either a Rockwell painting or drawing."

The accompanying photograph depicts a hand drawn stone, one of two from which the Rockwell lithograph, *The Inventor*, was pulled. This lithograph is in no way a "photographic reproduction."

Here is how *The Inventor* was created: Norman Rockwell created the image as a drawing on paper. A technically skilled professional chromist (his name is Heine Bauer), using Rockwell's drawing as his guide, copied Rockwell's image *by hand* onto two stones, one separate stone for each color and tone value to be expressed in the finished lithograph. In creating the two stones, *no camera, mechanical separation or photographic process was utilized*. Proofs were then pulled from the hand drawn stones. The proofs were then examined and corrected by the artist. After Rockwell's corrections were made, another proof was pulled and submitted to the artist. Upon obtaining Rockwell's approval, the lithograph edition was pulled from the stones, one color at a time, at the Shorewood Atelier in New York City. An antique, French manufactured, flat bed lithographic press was utilized. Each print was hand pulled from the stones. Then each finished lithograph was inspected by the artist and hand signed by him. The stones were then effaced by an "X" across the entire image (see illustration).

The buyer of Rockwell's lithograph, *The Inventor* (as does every customer who purchases a fine art graphic published by Circle, whether by Rockwell or any other artist), receives with his print a "Print Documentation" form. This form, in addition to describing the limits of the edition, the disposition of the plates, the number of "artist's proofs" and other information required by the art print laws of Illinois and California, also contains a section of relevant technical information entitled "The

"The Corruption of Norman Rockwell," an article by Joshua Kind, was published in the Spring 1979 issue of TTP. In that article Kind was sharply critical of the Norman Rockwell prints published by the Circle Galleries. Jack Solomon, Jr., on behalf of Circle Galleries, and Mel Hunter, whose Mylar method lithographs were also discussed in Kind's article, have requested an opportunity to reply.

*TTP's editorial position is sharply opposed to the practice of publishing lithographs printed from stones or plates drawn by professional colorists (as Solomon states was done in the case of Rockwell's *The Inventor*, illustrated below), as well as to what we regard to be undesirable use of the Mylar method, resembling in many ways the chromolithographs of the 19th century. We shall continue to express our views on this subject.*

Meanwhile, in the interest of a continuing dialogue among professionals in the field, we are pleased to provide space for these replies.



Involvement of the Artist and the Printer." By merely reading the form, the buyer of *The Inventor* is informed that the Rockwell lithograph was created as above-described.

The question before us is not whether Rockwell himself drew the stones, whether the lithograph was created under his control and direction, or whether this Rockwell lithograph can be or should be termed an "original" lithograph. (The issue of "originality" is a valid one and I will touch on it later.) But the question to be examined here is simply whether or not, as Kind alleges, "all" Rockwell prints ("no exceptions") were created as "photographic reproductions" where photomechanical technology was used. The answer to this question is simply: NO!

From 1970 to 1976, under an exclusive contract with the artist, Circle published 79 editions of Rockwell lithographs. They were created essentially as described above for *The Inventor*. In all cases, either hand drawn stones or metal plates were utilized. (Mylar plates had not yet been discovered.) In 71 cases, all stones or plates were hand drawn by a professional technician (chromist). In eight cases, because of special individual effects which the artist wanted to achieve, some color plates, created by photographic separations, were used in addition to "key" hand drawn plates. The Rockwell lithographs were pulled at some of the most prestigious fine art lithograph ateliers in the world, including Fernand Mourlot (Paris), Desjobert (Paris), Guordon (Paris), Shorewood (New York) and the American Atelier (New York).

Rockwell decided to use an expert technician to prepare by hand the stones or plates for his lithographs, rather than drawing them himself, simply because Rockwell decided that the technician could do a better job than he could. Rockwell was not expert in the technology of lithography. He wanted the plates drawn by hand so that the finished lithographs would have the crispness, purity of color and pristine quality that only lithographs pulled from hand drawn plates possess. Rockwell created the artistic image, corrected proofs before printing, and personally inspected each finished print prior to signing it, so that he felt that his lithographs were prepared under his direction and control. Even after proofs were corrected, and then re-corrected and approved by the artist, if the final printed edition did not meet the artist's artistic standards, Rockwell rejected it; indeed, over the years of the Circle Contract, a good number of fully printed lithograph editions were shredded at Rockwell's direction because the results were below his standards.

Rockwell's use of a technician to prepare the

plates as described in Circle's print documentation, was and is the same practice used by many of the world's most renowned artists for numerous editions of graphics (Dali, Chagall, Calder, Braque, etc.). Kind himself raises questions in this regard for editions of "original" graphics by Calder, Chagall, Oldenburg, Albers and the Photo-Realists. However, in Rockwell's case, unlike almost all others, it was determined to disclose the technical means of production (see Circle's Print Documentations) rather than be silent, since silence could perhaps mislead or confuse the buyer. Silence was and is the most universal practice of many "Big Name" artists and publishers who use technicians other than the artists themselves to create plates, stones or screens for "original" graphics. Kind, in his article, acknowledges this pervasive silence by these artists and publishers, but because they belong to Kind's "high art" world, he labels them as "reputable"; he does not criticize their deception except to say that they are "more circumspect" in that regard than Circle, which does provide collectors with documented technical information.

Unlike the lithographs, all of Circle's Rockwell collotype editions were printed from photographically prepared plates. Circle's print documentation clearly discloses this. Even Kind, in his article, admits that Circle's collotype print documentation is forthright and accurate. Rockwell made quality collotype reproductions of certain complicated paintings because he determined that lithography would not communicate these images properly; he wanted these paintings to be reproduced exactly, via photography.

Alleged "Corruption" 2: Kind attacks Circle's print documentation for Rockwell collotypes because it states that the same plates used for the pencil signed limited edition of 295 (including proofs) were used in producing an "unlimited" edition of collotypes selling for \$20.00 per print. (The "unlimited" edition is distinguishable from the "limited" edition in that it is not pencil signed and numbered, and each "unlimited" collotype contains printing in the margins to prevent forgery). Kind curiously finds corruption here, because if collotype plates (being gelatinous) break down, then the unsigned editions are not really "unlimited." Therefore, he says, the print documentation is erroneous.

When I authorized printing Rockwell collotype editions, as a general rule I would contract with Jaffe (the Viennese collotype printer) for a first "run" printing of 1,000 prints, 295 for the limited edition (without printing in the margins), which Rockwell signed, and 705 with printing in the margins, which were to be sold

as "unlimited" editions. I instructed the printers to retain the plates; in case we sold the 705 \$20 *unlimited, unsigned and unnumbered* collotypes, I wanted to order additional collotypes without incurring new plate-making charges. It is true that collotype plates, such as the ones used here, can deteriorate after a run of about 3,000, and that new plates can be created from the photographic separations. Circle does not represent that \$20 Rockwell collotypes are rare, limited editions. They are designated "unlimited" editions because when the plates were made, they were not destroyed, and the limits of the edition had not been preset, i.e., an "unlimited" edition.

Where is the "corruption"? Kind's point, carried to its logical(?) conclusion, seems to be that Circle should advise the purchaser of a \$20 Rockwell collotype that it is a rare limited edition (not "unlimited") since collotype plates break down.

Alleged "Corruption" 3: Kind points with alarm to the current price of *Gaiety Dance Team*, a Rockwell limited edition collotype, which sells for about \$2,000. He grudgingly admits that he can find no "corruption" in the Circle print documentation which accompanies the collotype, since the print is described there "with absolute clarity" and the public is not misled. What can be wrong? He implies that this collotype is overpriced because (1) the same unlimited, unsigned edition of that collotype sells for \$20, and (2) in the autograph market, a scrap of paper bearing Rockwell's signature brings \$25. Logic according to Kind: These collotypes are not worth \$2,000, but only \$45 (i.e., \$20 plus \$25).

If I owned a Braque drawing which the artist had neglected to sign, would its value increase if I bought Braque's autograph for \$35 from Charles Hamilton, the autograph dealer, and pasted it onto the lower right hand corner of the drawing? In the marketplace of fine art, hand signed paintings, drawings and graphics almost universally command higher prices than similar unsigned works, even assuming impeccable attribution for the unsigned works. And, hand signed posters by almost every major artist (for example, Chagall) bring many times the price of unsigned posters, and this is so even where the signed posters have no predetermined limit.

Why certain works of art bring astronomical market prices while others do not is a fascinating subject. I suspect that, as with most works of art, the law of supply and demand has a lot to do with the price of *limited, rare, signed* Rockwell collotypes, and not the pronouncements of professors. Professor Kind would learn a lot about the real world of prices by reading Adam Smith.

Alleged "Corruption" 4: Kind's next finding of corruption is a Mel Hunter lithograph which he examined while visiting our gallery. He says that it "... appears to the eye to be a photo-reproduction of a fairly complex painting ...". Perhaps it so appears to Mr. Kind's eye. But I wonder how educated a beholder Kind can be. To the eye of a person with only a modicum of knowledge about fine art lithography, this particular print can be nothing but a marvelously executed *original lithograph*. The values, shadings, textures, printing, ink deposits and colors are clearly "lithographic" and certainly not painterly.

And so they should be! *No painting of that print has ever existed*. In creating this lithograph, Mel Hunter drew by hand directly onto Mylar plates, one plate for each color, *de novo*. So there is no possibility whatsoever of the truth of Kind's implication that the plates for the Hunter lithograph were made by photographing an existing painting.

Alleged "Corruption" 5: Kind quotes Circle's print documentation, which discloses that Hunter's plates for this lithograph are Mylar. Kind read (or perhaps misread) Hunter's article in *American Artist* (October, 1977) on how Mylar plates can be used for fine art lithography, and he characterizes Hunter's lithograph as "an intermediate example of the *on-going corruption* (and perhaps ultimate future decay) of fine art printmaking and its gradual subsumption by photography or photographically supported processes." Kind continues "... The only 'traditional (fine art)' aspect here appears to be that the plates are hand-linked with a litho-roller, and the editions may be small."

Kind is mistaken. Here are just a few of the "traditional" fine art aspects involved in the making of Hunter's lithograph: (a) the artist drew each plate by hand, (b) no camera or other similar instrument was used to duplicate a pre-existing painting, (c) no dot structure or mechanical separation process was used to make the plates, (d) the edition was printed one color at a time by separate passes through the press, (e) the edition was hand fed, and hand pulled, on an antique French flat bed press, (f) the artist was present, "burning" and "manipulating" the plates as part of the creative process, (g) the artist inspected and hand signed and numbered each example in the edition.

Alleged "Corruption" 6: According to Kind, only lithographs pulled from stones are "Fine Art Lithography."

Of course, Mylar plates differ from Bavarian limestone plates. But isn't Kind's argument

Jack Solomon, Jr.,
is founder and
Chairman of the
Board of Circle
Fine Art
Corporation.

akin to attacking a car because it's not a buggy, or attacking penicillin because it's not chicken soup? Mel Hunter knows all about Bavarian limestone, and he has created numerous lithographs by that method. He happens to find that his artistic expression is better served, and that he can create a superior, artistically valid fine art print by using Mylar plates. Circle, as his publisher, accedes to the artist's methods, supports his creative experimentation, and is proud to publish his resulting fine art lithograph. We happen to believe that the artist should use the tools; the tools should not use the artist.

Alleged "Corruption" 7: Kind asserts that Mel Hunter's Mylar plate making process ". . . is precisely the process used by commercial professional offset printers to produce their printing plates" (emphasis added). Kind, even after reading Hunter's article, does not fully understand the use of Mylar plates; moreover, he obviously does not fully comprehend how plates are made for use in commercial lithography. In commercial color lithography printing, usually a *photograph* of art work is made with a camera. The photograph is then broken down by a separator (some separators are made by expensive laser beam machines), into the photograph's component primary colors (usually three, sometimes four). Color, tones and shades are achieved in the commercial print by the use of tiny dots of the primary colors. When these dots blend together in the finished print, the eye sees only the illusion of certain colors (a blue dot plus a yellow dot shows green). In the Hunter Mylar method, *plates are drawn by hand*, one plate for one color. The colors of Hunter's finished print are not the dots of commercial lithography, but *pure* colors derived from the inks. There are numerous other dissimilarities in the plate making process between commercial lithography and the Hunter hand drawn Mylar plates, but since Kind is so uninformed as to basic fundamentals, and concluded that the two processes are, as he puts it, "precisely" the same, why bother to point out many other differences?

Alleged "Corruption" 8: Kind opposes Mylar plates for original lithographs because ". . . there is no physical reason that the edition cannot be continued . . . ad infinitum, or even ad nauseum."

Kind asserts that the only true lithographs are those pulled from stones. Lithographs pulled from stones (although usually limited to editions of under 300) could be pulled by competent artisans to an edition of 50,000 or even more, with no discernible loss of the stone's ability to print the 50,000th lithograph as accurately as the first lithograph. So why is Kind

concerned that Mylar plates are also capable of producing large editions, unless, of course, his purpose is to confuse?

Alleged "Corruption" 9: Quoting Kind: Prints made from Mylar plates are not "'fine art' lithography where by my definition (and several others as well, including the Print Council of America), you have to touch that surface and manipulate that messy and mysterious stone."

It amuses me that a Professor of Art, who throws stones at others because of allegedly improper use of terms, can himself play so fast and loose with the English language. Does Kind mean to equate his definition of the term "*fine art lithography*" with the term "*original lithography*" or "*original print*"? Kind can define "*fine art lithography*" as he wishes, since "when I use a word," Humpty Dumpty said, in a rather scornful tone, "it means just what I choose it to mean, neither more nor less." But I am mystified about the Professor's reference to the Print Council of America, and to several unnamed "others." I am not aware of the Print Council publication attempting to define "*fine art lithography*," and, of course, I wouldn't know if the mysterious "others" have ever attempted to define *that* term. Perhaps Kind means to refer *not* to definitions of "*fine art lithography*" but to definitions of "*original print*."

If this definition is what Kind means to quote, then he has misquoted; even that definition does not state that the artist must "touch that surface and manipulate that messy and mysterious stone." And, had Mr. Kind prepared a properly researched article, he could have interviewed any number of Print Council directors.

He would have discovered that the Print Council of America in recent years has evaded defining the word "original." They do continue to publish reprints of the Zigrosser book, on original prints, because the book produces needed revenue for the Council.

Zigrosser's "Print Council" by most experts' definition is recognized as too restrictive and conservative, and is considered "obsolete." Four years ago the Council met and attempted to formulate some guidelines for the industry on this matter. The result, a five page outline of recommendations, does not define "original print." Rather, it describes the dealers' responsibility thoroughly to describe and stand behind the prints which they sell; to define the degree of mechanical intervention in the process so that buyers can accept or reject the print according to the degree to which it satisfies their own concept of originality.

But what about the term, "original print"?

Trying to define this term is like trying to define "beauty."

Every book ever written on prints and the print market has a section which attempts to define an original print. And every book—with the exception of A Guide to the Collecting and Care of Original Prints, by Zigrosser—comes to the conclusion that it cannot be defined except in completely subjective and abstract terms. (Kenneth Knapton, Jr., Executive Director of the Graphics Society, in *Graphics*, November–December 1978.)

Almost unanimously, American experts on contemporary print making reject rigid definitions of "original." (See articles by June Wayne and Richard Field in *Print Collector's Newsletter*, May–June 1972.) Their position, and the position of the overwhelming majority of their colleagues, is that (1) the artist should not be inhibited in the creative process of print making by preconceived definitions of "originality"; and (2) the dealer and artist should disclose the technical means as to how the print was created.

If an artist wishes to employ assistants, advisors, technicians, photo-mechanical devices, computers, or even laser beams, to create unique or multiple works, including prints, that is the artist's inalienable right, whether . . . the Print Council grants it or not. But if the artist or distributor conspire to withhold, misrepresent, or distort important information regarding their processes or working relationship from the public, then someone might well be cheated.

Calvin Goodman, in *Marketing Art*, p. 103 (GeeTeeBee, 1972).

Mr. Kind says more about himself and irresponsible reporting than he says about his targets by his neglecting even to mention the current generally accepted view of the definition of "originality" by the contemporary print making community.

Alleged "Corruption" 10: Kind next turns to Circle's lithograph edition, *Nureyev*, by Jamie Wyeth. He says that the use of the phrase, "original lithograph," to describe this print would appear "fraudulent." Kind describes this Wyeth lithograph as follows: ". . . a Wyeth painting is reproduced here . . . possibly with a photographic separation of the three colors of the work onto Mylar sheets." This is yet another of Kind's misstatements. No three color photographic separation process was utilized.

Furthermore, as with other Circle fine art prints, a print documentation accompanies the Wyeth lithograph. The "involvement of the artist and the printer" is clearly set forth. Jamie Wyeth created a special working maquette, us-

ing flat colors, to guide him in preparing plates for this lithograph. Although aided technically by a chromist while preparing the Mylar plates (as disclosed in the Circle print documentation), Wyeth drew by hand on the Mylar plates, made corrections and additions directly to the plates, experimented with the colors and inks, attended proofings of the edition, and experimented with, tried, rejected, and then finally selected the inks and the papers. The artist was immersed in the project from start to finish. The finished print varies substantially from the artist's maquette. Based upon his experiments with the printers, Wyeth decided to do a second state *Nureyev* on black paper, which differs artistically from the first state. Kind's implication that the Wyeth plates were prepared photographically by three-color process separation is ridiculous. Because the involvement of the artist was so intense, and because the plates were made by hand, and because the pulling was done in the traditional manner on an antique French flat bed press, it is hard to perceive how anyone could contend that *Nureyev* is not an "original lithograph," even though the term is a subjective one.

More Rebuttal: Kind's statement that Richard Lindner's and Jamie Wyeth's lithographs for the Metropolitan Opera portfolio are not "lithographs" is false; his statement that Leonor Fini's serigraph for the Metropolitan Opera is a "collotype" is false; his conjecture as to why the Merrill Chase Art Galleries called a halt to sales of Norman Rockwell prints is misleading; his description of *pochoir* is essentially erroneous, etc., etc., and on and on (and quoting Kind) "*ad infinitum* or even *ad nauseum*."

In his opening remarks the author stated that this reply constitutes only the first part of a two-part reply to Joshua Kind. He offers to send the second part to any reader who requests it. To do so, write Mr. Solomon c/o Circle Gallery, 108 South Michigan, Chicago, IL 60603.

A REBUTTAL TO JOSHUA KIND by Mel Hunter

Mel Hunter identifies himself as an artist who has made lithographs exclusively: 83 editions on stone and Mylar since 1972.

IN JOSHUA KIND'S ARTICLE, "The Corruption of Norman Rockwell," (TTP, Vol. II, No. 2, Spring 1979) seventy-one lines are devoted to an analysis of my Mylar* hand drawn lithographic methods. Kind's statements are so wide of the mark factually that they do damage to the scholarship of art upon which all of us depend.

Joshua Kind writes, and Tamarind publishes:

In an article in *American Artist*, October 1977, "Revolution in Hand-Drawn Lithography," Hunter describes in precise detail, and pride, and with 25 photographs, the "Mylar method" which allows "anyone to do lithography" with no fuss.

Nowhere in my article, its title, subtitle or credit on the contributors page do the words or even the thought, "allows anyone to do lithography," appear. And nowhere do the words or even the thought, "with no fuss," appear. The introduction to the article is addressed to the artist-readers of that magazine who are already familiar with the basic problems all artists encounter in making art. I sum up with this statement: "But with the Mylar method, as I have called it, you (the artist) are immediately the master of the *creative* end of the medium, just as the printer is the master of the subsequent printing end."

That is the main theme of that very long and detailed "how-to" article, which describes an extremely advanced means of making an original hand drawn lithograph. There is plenty of fuss described, but it is made clear that the artist can devote most of it to the creative development of his image, with little worry about whether the printer can successfully, faithfully print the edition later.

Joshua Kind writes and Tamarind publishes:

In looking at the "lithographs" of one Mel Hunter, also published by Circle Gallery, I found the curious phrase "plated by contact" used—in the descriptive literature accompanying the print—to define the process by which his prints were produced. This literature avows that the "lithograph"—which is traditionally hand-signed and numbered in pencil and yet appears to the eye to be a photo-reproduction of a fairly complex painting of trees, twigs, shadows, shrubs and horses—is *not* a photographic reproduction, but "hand-drawn lithography." I mention this work, because it may be an intermediate example of the *on-going corruption* (and perhaps even the ultimate future decay) of "fine art" printmak-

ing and its gradual subsumption by photography, or photographically supported processes.

The "lithograph" Kind tries to degrade by bracketing like that is the thirteen-color, hand drawn, large, bleed lithograph, *The Patriarch* (illustrated). It took six hard weeks to draw its thirteen separate color images. It was three key drawings, two in crow-quill pen with Pelikan tusche, and one in Stabilo No. 8046 pencil. All thirteen drawings were plated by contact to positive-working plates with my direct participation.

Joshua Kind continues: "The artist here, as in photo-silkscreen, although he does prepare the image, does not touch the reproducing surface or literally create it." The truth is wholly, categorically different. This Mylar lithographic method bears no faintest similarity to photo-silkscreen. My procedure, during the many days of printing *The Patriarch*, was witnessed by scores of people at the American Atelier in New York. Once the plates were on the flat-bed press (direct, not offset), extensive hand-modifications of the images were carried out, solely by me. Areas of the image were weakened by abrasion with pumice, quartz sands and acids, by me. Areas were deleted altogether, by me. Areas were added by means of additive tusche and copper pencil, by me. As each color was proofed and printed on to the growing image on the whole edition, with no *bon à tirer* impression, each of the thirteen colors was visualized in my mind, and the ink mixed at my direction at the side of Circle's antique, flat-bed press. The print built up to its final appearance entirely without reference to any painting, maquette, color sketch, or any other prop which would narrow and predispose my creative effort on the press. I insist on making all my prints in this way, and have made no painting or maquette used for a print in years. At no time did anyone except myself, even the publisher, Circle, have any idea of the appearance of the final print.

I submit that the work I have just described is among the most difficult enterprises any artist could undertake; and that those of us who try such projects are enriching the experience of the whole art form, not harming it.

Some of us who make Mylar prints do so much hand alterations of the plate on the press that the images become almost unrecognizable from the Mylar drawing. Kind's statement that this platemaking process, as we now use it, is "*precisely the process used by commercial, professional offset printers to produce their printing plates*" is completely erroneous (emphasis added). Almost all offset litho shops in the country make negative-working plates from

*Mylar is a registered trademark of the E. I. duPont de Nemours Co.

negative hard-dot film. Very few American offset shops have ever seen a positive-working plate, such as we use. Their technicians are completely unfamiliar with our soft-dot, semi-transparent pencil drawing on Mylar. And our plate-making procedures, which have been refined by a great deal of expensive and time-consuming experimentation, are foreign to both their experience and needs.

Joshua Kind writes and Tamarind publishes:

The Mylar method is really like camera-less photography—like contact-sheet printing: it is lithography only by virtue of the printing process, but it ain't "fine art" lithography where by my definition (and several others as well, including the Print Council of America), you have have to touch that messy and mysterious stone.

Kind is welcome to his own opinion confining "fine art" lithography to the image which comes from that "messy and mysterious stone," but he is in error in stating that the Print Council of America's famous definition, as it was formerly (but is no longer) put forward to define an original print, is in any way in agreement with him. That definition stated:

1. The artist alone has made the image in or upon the plate, stone, woodblock, or other material, for the purpose of creating a work of graphic art.
2. The impression is made directly from the original material by the artist, or pursuant to his directions.
3. The finished print is approved by the artist.

I see no statement that "you have to touch that surface." The definition says "make." My dictionary lists one hundred and fifty lines of definition for the word "make." Scores of them would fit the various means by which I make my printing image on the plate. And I see no reference that says I must manipulate that "messy and mysterious stone." Kind seems to disremember the words, "plate . . . woodblock, or other material." Well, I choose plates, and among them, whatever kind gives the best impression. So would almost any artist, without further ado. And I do touch the plate—the "original material" in the definition. In many cases, I do all the work to make my own plates from my Mylar drawings, and then make the same extensive image modifications to the plate as described above. My work fully complies with the Print Council of America definition, even if it had not long ago been de-emphasized by that body as overly restrictive.

Kind describes the use by me, and by extension all other artists, of these complex, incredibly sensitive and satisfying methods of making lithographic images as "on-going cor-



Mel Hunter comments: "Above is the thirteen-color hand-drawn lithograph, The Patriarch, 22½ by 30 inches, bleed four sides, which Joshua Kind says looks like a photo-reproduction of a painting. At the top of the page is an enlarged detail of the main crow-quill-drawn black key, showing cows, not horses, under the tree. Hand-drawing techniques are clearly visible on the print."

ruption" and even "the ultimate future decay of 'fine art' printmaking." Actually, along with splendid examples of traditional appearing lithographic images, a whole new kind of lithograph is emerging in the recent work of artists who are gaining experience with Mylar. Prints of almost unlimited colors, delicate tonal variation, and undreamed-of precision of editioning now come within the reach of artists, printmaking schools and one-man shops, as well as the big ateliers. The dominance of painting over full-color art is being narrowed, and as a consequence, the marketplace for such art, at print prices, is being spread across every level of society. If it becomes a people's "fine art" as well as a collectors' fine art, then so much the better for everybody. □

Hunter believes that "a whole new kind of lithograph is emerging in the work of artists who are gaining experience with Mylar."

I, LUDDITE
Notes on the
faux-graphique controversy
by Joshua Kind

THE LUDDITES were British stocking and textile workers in the early nineteenth century. They were so-named after their mythical leader, "Ned Ludd," when they reacted against the threat to their livelihood as handicraft workers—and perhaps their sense of personal dignity—which came from the arrival of the industrial revolution in their crafts. In so doing they gave their name to all of the machine-wreckers in our history.

At first it was not only that I thought of myself as a Luddite, but that I found I had adopted the attitudes of the intervening century and a half. It was embarrassing and even laughable to attempt to halt the flow of Western "progress." How pathetic and short-sighted it seemed to blame the machine for usurping one's sense of personal worth and the dignified relationship with human work.

But then I have come to understand the altered position of our present moment. Ned Ludd and his followers are no longer universally looked upon as an embarrassment with their "archaic" understanding of work. The Luddites may now stand, perhaps as Cézanne said of himself, as the "primitives" of the "new," i.e., our now well-evolved conceptions of the alienating forces that lie within the exploitation of machine-culture. If *faux-graphique* represent a confusion—whether deliberate or not—and a diminishment of the sense of art, then such printed works can only add to the streams of self-doubt that confound our larger society. Any lessening of the value of *personal* human achievement is but another access to alienation.

To quote myself (permissible enough in the *ad hominem* atmosphere engendered by the Kind/Solomon/Hunter debates), once the game of *faux-graphique* has been begun, it is endlessly fascinating. And as this game is meaningful, therefore it should be played. Last month, the American Express Company sent out an enclosure with its monthly mailing: ". . . a classic work of art from Walt Disney

studios . . . created in a *new art form* . . ." (all italics are mine). Reading on we learn that it is "an *original* serigraph cel on Mylar," *Mickey Mouse and Pluto*, published in an edition limited to 9,500, 9,000 exclusively for members; the 500 remaining are reserved for patrons of Circle Galleries (Mr. Solomon's establishments). It is a *new art form* because it is a "serigraph cel printed on Mylar," and yet, we are told, "serigraphy is an ancient form developed in China centuries ago, Disney has applied this *ancient* art form to Mylar, thus creating a *new art form* . . ." Further on in the text the new art form has become an "important collectible" as well as "a piece of movie history." Nowhere is it clearly stated in this literature—even Mr. Solomon would have to agree—that the literal thing in hand is, after all is said and read, only a reproduction of a cel (which is, incidentally, a hand-drawn image on a transparent surface from which an animated movie is made). The nearest approach to a representation of what is being offered is the double-talk: "and just as an original print is signed by the artist, each serigraph bears the distinctive Disney Studios seal."

My academic and unworldly mind, usually disinterested in the machinations of commercial enterprise, is forced to pay attention. Ask not for whom the *faux-graphique* tolls, it tolls for thee. Beyond any fun, this is a subject for consideration by all those who are interested in "Art." Why, I ask, did both Hunter and Solomon get so unwrought by an article that appeared in specialized publications, where it would be read only by a handful, and where the overlap between this specialized audience and Rockwelliana is probably so small as to be non-existent? Hunter's misconstrual of my attitude is seen when he labels the discussion as my "attempt to influence the judgment of the art market." **Not the market, but the meaning is the issue.**

A FEW REMARKS about individual corruptions:

Corruption 1: In detail, I am of course wrong in that not all of Rockwell's prints are photolithographic reproductions—but then don't I "win" in principle? Now we know that Rockwell's lithographs are *hand-made* reproductions; *The Inventor*, Solomon tells us, *was drawn on the stone by Heine Bauer*. Solomon's self-righteousness is charming. Does his Circle Gallery documentation really "describe" the process so clearly set out by our understanding that *chromist* is equivalent to *copier*? After all, the print documentation sheet for *Settling In* (as an instance), released by the

Joshua Kind is contributing editor of *The New Art Examiner* and a member of the faculty at Northern Illinois University.

gallery in August 1978, offers only the following as "Involvement of Artist with Printer":

The artist created the image as a drawing on paper. The image was then transferred by a chromist by hand onto separate lithographic plates. . . Proofs were corrected and approved by the artist. . . Each print in the edition was inspected and signed by hand in pencil by the artist. . .

Not only is that linguistic obfuscation, but the gallery personnel with whom I spoke seeking clarification of the techniques implied by such verbiage usually did not understand the issues involved.

Incidentally, although I did say that the "high art world" was "reputable," my use of quotation marks in the original article supplied an innuendo which changed the drift of everything. To say that I do *not* criticize the deception of some certain aspect of graphic art in that other world is clearly to misread my remarks.

Corruptions 2 and 3: My point is lost in Solomon's reply. I am arguing indeed as a Professor—in the sense of a truthseeker, against falsity and unclarity. Let's say that I was trying to take away from the image of art as mystery—which I would like to preserve—some of its enslavement to irrationality. Solomon also misses the irony of his own assertion that a "Braque drawing which the artist had neglected to sign" is indeed a "signed" work. Even with Rockwell's signature on one of the lithographs drawn by a chromist there is still *no* work of art—market value notwithstanding. I am really Luddite enough to want a clear distinction between art and collectibles, e.g., the Walt Disney serigraph cels to which I have referred.

Corruptions 4 and 5: Of course there is a "painting" that exists of that Hunter print: it is the combinatory view of the several transparent Mylar sheets (i.e., not plates, as Solomon continuously refers to the Mylar drawing surfaces). I wonder why neither Solomon nor Hunter ever refers to my assertion—whimsical and academic though it may be—that the latter's work is really like the cliché-verre, brought up to date, as it were. The "painting" is on the Mylar sheet; the artist did *not* draw each plate by hand; each was "plated by contact," to use the precise yet cloudy phrase (cloudy, that is, without further explanation) found in the accompanying literature. My point and assertion of camera-less photography" and my analogy to contact printing a la cliché-verre is never referred to in either rebuttal. (See their comments on Corruption 7.)

IF IT REALLY IS THE CASE that both Solomon and Hunter believe what Hunter says in his last two paragraphs, then why did I have to scratch around and through the apparatus of commercial sales talk to arrive at a clear understanding of these processes? Would I have had any argument at all if there had been clear disclosure of the nature of the technical processes used. Such words and phrases as *plated by contact*, *chromist* and *maquette made by the artist* do not go far to explicate the nature of the work for the prospective purchaser who, even if he does not care at all, has the right to be fully informed.

Corruption 8: Stones and plates can be read interchangeably for my argument. What appears not to be interchangeable is a *hand drawn* image on a stone or plate; such a hand-drawn image is synonymous with the printing surface; when the stone or plate is regained the image no longer exists. With the Mylar method, even after destruction of the printing plate, the image still survives on the Mylar sheets and may be contact-printed (i.e., photographed) on other printing plates. Is this only a philosophical distinction? Or is it a very real one?

In thinking about the last two corruptions mentioned by Solomon, I am inclined to ask whether if these same works—the Wyeth *Nureyev* for instance—were to be photo-etched and then printed from an intaglio plate, would we then accurately call them "etchings," keeping in mind the traditional qualities that we think of when we use the word "etching." Ultimately, what I would wish to establish is a series of terms that would serve clearly to distinguish graphic works made traditionally (i.e., printed from plates hand drawn by the artist) from all those made in "newer" manners. It is not the printing surface that is at issue; it is rather how those images get on that surface. When well-known artists are involved, it is clearly an exploitation of their reputations to present them as "printmakers" when *literally* a reproduction of their already published work is the final product of their collaboration with a publisher. □

It is not the printing surface that is at issue; it is rather how those images get on that surface.

TUSCHE WASH: Expressive Development and Alternatives by John Sommers

THE EXPRESSIVE QUALITIES of tusche wash have long fascinated artists working in lithography. Although in the first half of the nineteenth century most artists' lithographs were drawn with crayon, the later years of that century saw many fine lithographs executed primarily or entirely in wash. James McNeill Whistler, beyond all others, developed great virtuosity in the use of washes, working in collaboration with the English printer, Thomas Way. The specialized technical approaches developed by Whistler and Way involved use of delicate tusche washes on polished stone. These washes were subsequently processed, acid-bitten, scraped, re-applied, and the process was repeated until the merging tonalities yielded an atmospheric image of great sensitivity.

While throughout the first half of the twentieth century, most lithographs were still drawn in crayon, tusche wash techniques found increasing use both in France and the United States. In France, Georges Rouault, Marc Chagall and Joan Miró; and in the United States, Arthur B. Davies, George Bellows, Rico Lebrun and Eugene Berman used tusche washes in a variety of ways. The principal collaborating printers were Mourlot and Desjobert in France, and Bolton Brown, George Miller and Lynton Kistler in the United States.

Above all others, Pablo Picasso was the master of wash techniques, achieving an unparalleled restraint and control in his lithographic masterpiece, *La Colombe* (1949). As one looks at this lithograph with an understanding of the technical complexities of zinc, when used in combination with tusche, and as one realizes the problems created by Picasso's use of both additions and deletions in creation of his image, there is no doubt in one's mind that Picasso's collaborating printer was truly a technical master. Neither can one doubt but that the technical proficiency of the printer was challenged and consequently sharpened by the demands of the master artist.

During the 1960's, in the earlier years of the Tamarind program in Los Angeles, a number of American artists were offered a unique opportunity to explore the expressive potential of tusche wash techniques. Among those who

found such techniques important in the development of their images were Sam Francis, John Paul Jones, Matsumi Kanemitsu, Nathan Oliveira, June Wayne, Dick Wray and Adja Yunkers. Just as Picasso's demands had served further to challenge the abilities of Mourlot, so the demands made by these artists served to challenge the Tamarind printers of those years, forcing them to expand their technical knowledge and hence to make possible a new aesthetic potential.

It was in 1971 that Leonard Lehrer made the first of his tusche wash lithographs at Tamarind Institute. The subjects were formal gardens. While the formats were relatively small, the drawings were broadly conceived, using highly controlled wash-shapes. Since then, Lehrer's drawings of landscape subjects and of building facades have become infinitely more complex. The increasing refinement both of his vision and of his drawing technique has brought about a parallel refinement of the technical processes required in realization of his lithographs.

In his 1974 lithograph, *St. Basil's Cathedral*, Lehrer began to divide the image into smaller wash shapes which lay side by side in construction of his image. Since that time he has even further refined his wash technique in such prints as *Puerto Vallarta* (1977) and *View of St. Petersburg* (1978). The landscape shapes and shadows have been fractured into many tiny, tusche-wash facets, closely juxtaposed. Lehrer's current lithographs, both large and small in scale, are composed of many small brush strokes of tusche wash; rich, deep values lie beside strokes of the greatest delicacy, intermixed and overlapped, so that this wide range of values is woven into a single wash-image.

The technical requirements of Lehrer's images—both in preparation of the washes used in his drawings and in the processing of his stones—have required concurrent refinement of the printer's methods. And such refinement of these methods has in turn suggested to the artist an even further refinement of his drawings. This experience provides but one example of the way in which an intimate and extended collaboration between an artist and a master printer results in an ever-continuing refinement

of the techniques used in the making of a lithograph. Leonard Lehrer has now collaborated with Tamarind Master Printer Wayne Kimball for more than eight years, first at Tamarind Institute, then in San Antonio, and now in Tempe, Arizona, where both are members of the faculty at Arizona State University. For a brief description of the methods used by Lehrer and Kimball in the preparation of washes, wash-application, and processing of the drawings, see Daniel Britton's account of their collaboration (following).

NOT ALL LITHOGRAPHERS who seek wash-like imagery have used traditional tusche techniques. Albert Christ-Janer, whose many brilliant lithographs have the look of tusche wash, actually used a grease-based tusche only in one instance while working at Tamarind. Christ-Janer's lithographs are characterized by flowing, wash-like patterns developed not with tusche but rather with non-lithographic materials under running water. He used a variety of resists, among them wax, as well as various sprays (both lacquer and paint). He usually could not know precisely what the rolled-up image would be like, but he took delight in the developing image as it emerged in a grease base after processing.

Robin Cohen, an undergraduate student in lithography at the State University of New York at Buffalo, has developed similar processes which, like Christ-Janer's, have a wash-like quality. Cohen, who studies at SUNY with John McIvor, has developed a process which provides a highly individual image. As a first stage in the development of her aluminum plates, she sprays lacquer from a pressurized can into a puddle of lacquer thinner. Because of the materials involved, her indirect drawing processes make for a direct, dependable and durable printing surface. Cohen's methods, totally different from those used by Lehrer and Kimball, are described in her article on page 27.

ARTISTS CONTINUE TO FIND creative stimulus in the drawing potential of tusche and of materials with similar aesthetic character. Printers continue to be interested in extending that potential by perfecting both materials and processes through which the artist's intent can be fully realized. Research currently in progress is aimed at fortification of traditional tusche washes against both the corrosiveness of etches and the abrasion caused by the buffing of gum films. Already some promise has been found in the addition of tiny amounts of polymer to tusche wash mixtures prior to drawing. There is no doubt that as printers perfect this approach, artists will extend its use and application. □



Leonard Lehrer testing tusche stock solution on bristol vellum.

WATER TUSCHE WASHES

Observations of Collaboration between Leonard Lehrer and Wayne Kimball *by Daniel Britton*

THE ARTIST BEGAN by filling several cans of LaFavorite tusche with distilled water until they were almost full; he then covered the cans loosely with their lids and allowed them to sit for two days to soften the tusche to working consistency.¹ Once the tusche was sufficiently soft, he stirred it with a brush until a thick, black, stock solution was obtained. The concentration of the stock solution was considered to be correct when a brush mark made on a clean, white piece of bristol vellum, laid down as an opaque, black mark.²

When an appropriate stock solution was obtained, three 5-ounce, plastic cups were filled approximately two-thirds full with distilled water. Three separate values of tusche wash were mixed in these cups, a dark grey, middle grey and a light grey, adding stock solution by the brush load. Each of these solutions was then tested by brushing it onto the vellum paper. Small swatches applied to paper produced washes very similar in appearance to those of a printed wash. When the desired reticulation, bloom, and value of these test solutions was achieved, each was strained

*Daniel Britton
is Assistant
Professor of Art
at Arizona State
University.*



Leonard Lehrer. *View of Warsaw*, 1978.



Detail of drawing, in progress on the stone.

through four layers of cheesecloth to remove foreign matter.

In final preparation for the wash drawing, a grey Bavarian limestone, finished with 320 carborundum grit, was set into drawing position and carefully leveled. The artist then laid out a very light preliminary drawing on the stone surface using a 5H pencil. Final tests of the prepared washes were made in the margins of the leveled stone.¹ When the wash test on stone corresponded to the preliminary test done on vellum, the artist, using a separate brush for each wash, executed the final drawing in tusche wash.

The Etch

AFTER CAREFULLY EXAMINING the washes, the master printer, Wayne Kimball, determined an overall etch which would stabilize, but not burn out the bloom of the weakest

(lightest) wash in the drawing.⁴ Rosin and talc were applied and after removing the excess, Kimball liberally applied the overall etch to the entire surface of the stone. As the etch thickened, he added fresh solution and with a brush, kept the etch material moving for a 10- to 15-minute period. At the end of this time he carefully buffed down the etch to a smooth, dry film, using a cheesecloth pad. Generally speaking, the stronger the weakest overall etch can be, the better will be the adsorbed gum film.⁵ The overall etch for the lightest washes in *View of Warsaw*, was determined by Kimball to be three drops of nitric acid per ounce of gum arabic. All other washes were then spot etched, one value at a time, with predetermined etch strengths.

The second major areas of value were those just slightly darker than those for which the overall etch was designed. The master printer felt that, in this case, four drops of nitric acid per ounce of gum were needed. After preparation, this etch solution was carefully painted only on the areas whose value was appropriate to that etch. Factors to be considered in selecting correct etch strengths are the warmth or coolness of wash, the density of reticulation patterns, the type of tusche used, the type of solvent used, and the darkness (or relative hardness) of the limestone.⁶

Again a determination was made of the next darkest value, and a calculation was made that a seven drop etch solution was needed to stabilize those areas. This etch was applied as was the previous spot etch. Finally, the darkest areas of the drawing received an etch strength of thirteen drops of nitric per ounce of gum arabic, applied as those before. It is important to note that in Kimball's procedure each of the separate spot etches is carefully painted on the stone until the image is literally re-drawn using a separate etch strength corresponding to the value of each area of tusche.

Once the entire drawing had received its first etch (which took the printer six hours in the case of *View of Warsaw*) the entire stone was covered with pure gum arabic and massaged gently until all the dried etch pools were back in liquid suspension. It was then buffed down with clean, dry cheesecloth to a uniform and very tight film. After fanning until the gum film was dry, the drawing was washed out with lithotine and rubbed up with asphaltum. When the asphaltum was dry, the stone was washed off with water and the image was rolled-up with ink. Kimball prefers to use Charbonnel Noir a Monter, without modifiers, for the roll-up as well as for proofing and printing.⁷ Within five or six inking passes, the image was developed to its original intensity. With the image completely



Wayne Kimball spot etching the stone.

inked, and after application of rosin and talc, the second etch was applied in essentially the same manner as the first. □

1. Normally, LaFavorite tusche should not need soaking or other special procedures to induce solution with water; due to inconsistencies in production, however, LaFavorite is sometimes either very slow to soften and dissolve, or it will clot in solution, or it will not dissolve at all without further assistance from another solvent. Where clotting occurs, the top layer of hard tusche should be removed, which usually serves to expose the soluble tusche. Where it will not dissolve at all, the addition of a few drops of isopropyl alcohol with the water will usually bring the tusche to solution in a few minutes. It is found, however, that addition of alcohol affects the tusche reticulation pattern, making it more irregular, with larger clumps, as compared to tusche reticulations made by the water material alone.—J.S.

2. It may be helpful to note that two cans of LaFavorite tusche produced stock solutions that were a brown-black in appearance. These cans were discarded in favor of the cans producing cooler, blue-black stock solutions. The brown-black solutions create washes greasier than normal and consequently create difficulty in accurate calculation of etch strength.

3. To provide an indication of the relative visual intensity of the value of the dried test washes on the stone margin, a value reading was taken with a Kodak 24-step grey scale. The readings, which included the value of the stone color, were approximately 1.7 in the darkest washes, 1.4 to 1.5 in the middle values and 1.0 to 1.1 in the lightest values.

4. TBL, Section 2.5, paragraph 6, page 61.

5. TTP, Vol. 2, No. 2, page 54.

6. Since there are those who may not have the best quality, grey limestone on which to do drawings, it is well to note that etch strengths used on light grey or hard yellow stones should be weaker than those described for the Lehrer drawing. In addition, the time the etch is left on an area and the volume applied are variables which must be considered in determination of the etch strength. That these spot etches are painted on and allowed to remain until after they are dry indicates two considerations, first, that they are formulated for a very slow chemical reaction, since they will remain in contact with the stone for an extended period, and, second, that the volume must be relatively small since in drying, the etch film must not craze over the wash surfaces.—J.S.

7. The washes, etched by Kimball in this method, have reached a highly desirable stability and can thus be rolled up securely with the very soft and greasy Charbonnel Noir a Monter.—J.S.

IMAGES PRODUCED DIRECTLY IN LACQUER by Robin Cohen

I HAVE BEEN EXPERIMENTING for two years with the use of lacquer as a direct means of producing imagery on aluminum plates. I am familiar with the use of polymers with an air brush, through which means a direct image can be achieved; but what I desire instead is to achieve a fluid, rather than a spattered effect.

I have found spray lacquer and lacquer thinner to be the most versatile materials in creation of an image on my plates. The washes I create adhere immediately to a new aluminum plate without counteretching. While lacquer sprayed from either a pressurized can or an airbrush leaves a uniform deposit of tightly knit dots, lacquer sprayed into puddles of lacquer thinner creates flowing, continuous tones, much like tusche wash. The tones of my lacquer washes are not reticulated but are consistent and crystal clear. When processed, these lacquer washes are stable and "what you see is what you get." Since the image is not grease based, but is entirely created in lacquer, the only chance of filling occurs as a result of an inadequately adsorbed gum-film formation or repeated dry roll. Because you by-pass one step (the exchange of grease for lacquer) processing errors, which cause image failure on grease based elements, are eliminated.

My basic imagery is developed by flooding the plate with lacquer thinner, then attacking the plate with a can of spray lacquer. The distance and angle from which I spray makes a difference in the image. I like to place my plate on a table and while standing above it, spray the lacquer from varying distances into the wet lacquer thinner. To preserve delicate puddle-tones and flow patterns, I simply allow it to evaporate; the directed flow of air through a hair dryer can, however, be useful in creating a subtle, sensual, wave-like imagery. In areas where I feel I have too much lacquer, I blot with a paper towel, sponge, fabric or other material with absorbent as well as textural qualities. Depending upon the material used in blotting, I can achieve textures ranging from stone, to wood or velvet. Usually this subtractive method gives me the image I desire.

In the initial preparation of the plate for drawing, or in preparation for the addition of shapes during drawing, I sometimes mask the non-image areas with gum arabic and Contact brand contact paper. I prefer to use gum arabic as a stop out under the Contact paper because the paper alone tends to leave undesirable traces of glue residuals on the plate. In addition, the Contact paper is useful when forming



Robin Cohen simultaneously creates her wash-like image and the base from which it is printed.



The image is developed by alternate drying of solvent pools and successive applications of lacquer thinner and spray.

a hard edge, since the diluted spray seeps through the edges drawn with gum alone. If at any point, crayons, pencils or other grease based materials are used in the drawing, the processing must include, beside the proper etch for the materials, the washing out of all the materials, both grease and lacquer, with Lacquer "C" Solvent; this must be done in order that the image may be put into a uniform lacquer base.

The following steps may be used in processing the plate drawn in lacquer only:

1. Talc should first be applied to the image and the first etch then applied and buffed down tightly with a cheesecloth pad. A two- to

three-minute etch will suffice, using either a commercial plate etch or four drops of phosphoric acid to one ounce of hydrogum. (At a pH of 3, this is closely equivalent to Tamarind's preferred plate etch mixture of 1/2 TAPEM-pH 2.5 to 1/2 gum arabic-pH 4.5. See TTP, Vol. 1, No. 2, p. 15—J.S.) Let this etch rest for 15 to 20 minutes. There is no need to roll-up the image prior to the second etch.

2. If the image is very light, I generally use pure hydrogum for the second etch. If the image ranges from a medium grey to black, the second etch should contain 2 to 4 drops of phosphoric acid per ounce of hydrogum. Since volume is a variable in etch strengths and my images are produced on large plates, I generally use 3 to 4 ounces of etch.

3. Buff down the etch film and allow the plate to rest for 20 minutes.

4. Using a lint-free rag, apply diluted ink over the image areas and buff it in as a printing base.

5. Wash off the plate surface with water. Because of the lacquer base, distilled water is not required.

6. Roll-up as is usual in normal lithographic procedures.

The amorphous imagery which I create through the use of lacquer has led me to search for a printing ground that is compatible. I have printed on fabrics, including satin, silk and taffeta. I use the plate as only one of the steps in my printing process. I have done multiple off-sets of the plate on fabric as large as eighteen feet in length. To create many diverse textures and subtleties in color tonality, I offset the image, not only from the plate, but also from the wet ink printed on other surfaces. □

THE USE OF LACQUER BASES IN PRINTING FROM STONE

by Jeffrey Sippel

ALTHOUGH LACQUER BASES ARE USED routinely in processing plates, considerable doubt has been expressed as to their value on stone. Stones are usually printed from a grease base (asphaltum), following the traditional methods employed since the earliest days of lithography. In an effort to determine the usefulness of lacquer in printing from stone, comparative studies have been conducted at Tamarind. In these studies similar crayon and wash images have been printed from both lacquer and grease bases at one time.¹

Several factors should influence the printer's decision whether or not to use lacquer as a base when printing from stone, among them the complexities of proofing, the size of the edition, the characteristics of the drawing, and the

printing inks to be used. If the image is to be printed in color, there is good reason to employ a lacquer base, as its use can ensure safer proofing and printing. The properties of lacquer, as well as the chemical and physical nature of grease reservoirs in stone, are important considerations in the printer's choice.

In his book, *Chemistry of Lithography*, Paul J. Hartsuch explains that lacquer is entirely suitable for use in hand lithographic printing because of its durability.² Lacquer bases have little tendency to break down under the friction and physical abrasion of proofing and printing, i.e., the movements of the sponge, roller and scraper bar. Lacquer also serves to protect the grease reservoirs from chemical burning by water during wash off, prior to roll up, or between impressions during printing, when the grease reservoirs are depleted. In addition, delicate crayon drawings or light washes are better protected from the acidity of a counter-

Jeffrey Sippel completed study as a Tamarind Master Printer in May, 1979

etch solution if put into lacquer before counter-etching.

The use of lacquer on stone has in the past been a controversial issue among printers. It has sometimes appeared that delicate tonalities become unstable when printing from lacquer, becoming sometimes lighter and at other times darker and coarser. We now believe that while the use of lacquer may entail some risk, the risk is less severe than is the case when printing the same image from a grease base. The problems that have been encountered derive less from the properties of lacquer than from the processing techniques of the printer.

The lacquers used in lithographic printing consist of organic resins dissolved in organic solvents which are spread on the printing element to a thin, tight film and fanned dry. Most of the solvent evaporates and leaves behind the resin, or dry lacquer, imbedded in and covering the grease reservoirs. The key to consistent and accurate printing lies in the chemistry of the grease reservoir and in the physical adhesion of the lacquer to the image. It is essential that solvent be used to remove *all* grease from the reservoirs before application of lacquer. If all grease is not removed there is a chemical imbalance in the grease reservoirs which may cause the image dots to grow or fill; it may also impair the ability of the lacquer to bond to the reservoirs, and the image may then become blinded (water burned) due to lifting of the lacquer. Faulty application of the lacquer may also cause problems. If the lacquer is not thoroughly dry when the ink base is applied, the solvents contained in asphaltum and/or lithotine may attack it. The resultant weakening of the lacquer causes it slowly to deteriorate, progressively lifting from the image during rolling, proofing and printing.

The individual characteristics of ink must also be considered by the printer before deciding whether to use a grease or a lacquer base. When organic inks are used (including most blacks), a stone need not be processed in lacquer. Inorganic inks, however, tend to be more abrasive and are less well received by printing bases. Opaque white inks containing titanium dioxide and most metallic inks are especially abrasive. Some inks are susceptible to flocculation as a result of long press runs and may not transfer to stone properly.³ Inks containing a large amount of opaque white or transparent base, both commonly used in contemporary color lithography, are relatively poorly received by print bases. Lacquer generally receives ink more readily than grease, indicating that it will be a more suitable base for such inks, especially when long edition runs are planned.

TO DETERMINE THE DIFFERENCES between stones counteretched, proofed and/or printed from grease and lacquer bases, the Tamarind study was controlled to reduce other variables. Delicate crayon and wash tones were drawn on a single stone, grained to the 240 grit surface normally used for these drawing techniques. Several such stones were made, ranging from a good, hard grey to a good, medium yellow. Each drawing was processed and rolled up with black printing ink, thus establishing it in grease; a fresh, tight gum film was then applied. A sheet of clear contact paper was placed over the entire surface of the stone. The contact paper was cut so that the center portion of the image remained covered while the outer portions (uncovered) were washed out and processed with lacquer: one side with blue lacquer, the other side with red. The two lacquers used in this study are those currently used at Tamarind. Both are commercially available: the blue lacquer is a product of Lith-Kem-Ko Corporation (Lith-Kem-Ko Deep Etch Lacquer "C"); the red lacquer is Titan Vinyl Lacquer, manufactured by the RBP Corporation of Milwaukee.⁴

After the lacquers had dried on the stone, the center portion of the image was uncovered and washed out. All three areas were then rubbed up with asphaltum, washed off, and rolled up in black ink before proceeding to print them in color. When the stones were rolled up, little or no difference in tonalities was visible among the three printing bases. Although there is an initial difference between the receptivity of the bases to black ink, this difference disappears after a few impressions are pulled, leaving virtually no variation among them. Slight variations are, of course, to be expected if different stones are used.

After the stones were processed and proofed in black, they were printed with color inks containing a large portion of either opaque white or transparent base. The lacquered areas rolled up almost immediately upon contact with the roller, while the grease base portion lagged behind. Lacking the favorable properties inherent in black ink, these inks prove to be much less compatible with a grease base. In some cases, losses from printing with a grease base were minimized after several impressions were pulled (these were crayon drawings); in other cases, however, losses continued throughout printing because of the lack of ink-receptivity of the grease base, which in turn led to water burning of the image.

A second problem in use of inks of light value—those containing considerable white or transparent base—is the difficulty encountered in discerning fine tonal values which can be

NOTE:

Because of their highly toxic properties, precautionary measures should be taken when working with lacquer and its solvents. Always use exhaust systems and respirators.

Lacquer is the preferable base for the printing of fine images from stone in inks containing white or transparent base.

easily seen when using darker inks. It should be noted that the Tamarind tests were made on small stones and that washoff time was therefore minimal. Extreme care must be taken when working with delicate imagery on large stones because there is a greater risk of burning the drawing during washoff.

Further tests were conducted on stones proofed in black, then counteretched and drawn into again.⁵ After the additions were made, the stones were again processed in black ink. They revealed essentially no variation in tonalities, whether in grease or lacquer base.

We conclude on the basis of this study that lacquer is the preferable base for the printing of fine images from stone in inks containing white inks and/or transparent base. Darker inks and stable, organic inks can easily be printed from a

grease base, provided that there is proper control during washoff. If a printer chooses to process stones with lacquer, extreme care and fine critical judgment during processing are essential to good results. □

1. Adams, Ben Q. "Printing from a Lacquer Base," *TTP*, Vol. 1, No. 3 (January 1975), pages 30-31.

2. Hartsuch, Paul J. *Chemistry of Lithography*, (2nd edition, 1961), page 31.

3. Hartsuch, page 313.

4. The Deep Etch Lacquer "C" contains vinyl resin in ketones and aromatic hydrocarbons; Titan Vinyl Lacquer contains vinyl chloride, dibutyl phthalate and plasticizer in xylene, diacetone alcohol, isophorone and ketone (with rhodamine B dye).

5. The counteretch that was used contained ¼ teaspoon of citric acid in 10 ounces of distilled water; it was applied three times for one minute each.

LITHOGRAPHIC CHARCOAL (continued from page 9)

6. Place the charcoal sticks on a soft, absorbent cloth and tumble them to blot off the hot liquid saturant adhering to their surfaces. Wipe each stick with a soft cloth to insure that no congealed saturant remains which might cause the drawing to misprint.

7. When at room temperature, each stick should be marked from end to end with a toothed wheel or scratched with a sharp metal point along one side so as to distinguish it from standard, untreated charcoal which is identical in appearance.

8. When cool and marked, the crayons are ready for use by the artist.

compressed charcoal consists of stearic acid (20 oz.) and carnauba wax (5 oz.). The temperature can again be between 250° and 275° in the absence of soap.

1. A brief description of lithographic charcoal (including the formula for the No. 730 crayon) was published by Mr. Phillips as an appendix in *Jean Charlot's Prints* by Peter Morse (1976). It was at Mr. Morse's suggestion that we first began our correspondence with Mr. Phillips, leading to publication of the present article. We express our deep appreciation to Mr. Morse for this and other courtesies.—Ed.

2. The no. 730 crayons were used by Jean Charlot and other professional artists, as well as by students in Mr. Phillips' classes, beginning in 1934. He has continued to make these crayons and to supply them to artists into the 1970s. The no. 224 and 721 crayons were used in classes at Iowa State University and San Jose State University between 1934 and 1943; Mr. Phillips has also continued to supply the 721 crayons to artists.

3. Sources of supply suggested by Mr. Phillips include the following: **Compressed charcoal.** Grumbacher V49-5 (hard); A. W. Faber, Castell 2899, no. 5 Siberian charcoal; Conté à Paris, Blazy-Conté-Gilbert, no. 2359, no. 4. **Carnauba wax.** No. 1 yellow, Eimer & Amond, New York. **Stearic acid.** Triple pressed no. 1614 in one lb. containers, distributed by Robinson Laboratory, Inc., San Francisco, CA 94107.

Crayon Formulas

No. 730 lithographic charcoal crayons:

These crayons are made from the hardest variety of charcoal. The saturant for 36 sticks of charcoal is composed of stearic acid (17 oz.), castile soap (1.6 oz.) and beeswax (1.4 oz.), and is prepared in accordance with the procedures given above.

No. 224 lithographic charcoal crayons:

A somewhat softer charcoal may be used than that selected for no. 730 crayons. If a charcoal of reasonable hardness is not available, the amount of carnauba wax may be increased to a maximum of ten ounces. The saturant for 36 sticks of medium grade charcoal contains stearic acid (20 oz.) and carnauba wax (5 to 10 oz., see above). The procedures remain the same except as they apply to castile soap and beeswax. The temperature can be between 250° and 275° in the absence of soap.

No. 721 lithographic charcoal crayons:

These crayons are made from dense, compressed charcoal obtainable in round sticks. It is made in a range of hardnesses. The saturant for 24 sticks of

Tamarind Tests

THE MATERIALS PURCHASED for use in Tamarind's tests of the lithographic charcoal crayons described by Mr. Phillips were obtained locally in Albuquerque.⁴ They differed somewhat from those that he describes. Charcoal sticks (hard, medium and compressed) were obtained at a local art supply store. Stearic acid (triple pressed) was available in solid form. The carnauba wax used in our tests was in li-

4. Tamarind's tests were conducted in May and June, 1979, by Tamarind Master Printer Jeffrey Sippel.

quid form, which posed a problem because of its reluctance to mix with stearic acid at higher temperatures. We assume that carnauba wax in paste form would mix more readily. Use of liquid wax prolonged the process of making the crayons because temperatures of 150° to 200° were required until the oxygen was released and the wax completely mixed with the acid.

No other problems were encountered in making the crayons in accordance with Mr. Phillips' procedures. The saturants were heated outdoors. We repeat and underline Mr. Phillips' warning with respect to the dangers of fumes in inadequately ventilated spaces. We did not test the formula (No. 730) that makes use of the hardest variety of charcoal and requires addition of beeswax and castile soap to the saturant.

We were very pleased with the characteristics of the charcoal crayons that we made. They work well on stone and have less tendency to scumble from build up of crayon than do the standard Korn's crayons. Their tonalities are soft and delicate, and resemble drawing on paper. They can easily be sharpened in any pen-

cil sharpener (because of their excellent beam strength) and hold their points well.

Persons accustomed to standard crayons may be deceived by the tonalities that result when drawing with charcoal crayons. Drawings are brownish in hue, instead of the normal black, until they are processed and rolled up in ink. The artist must be aware of this characteristic and calculate tonal values accordingly. It may be difficult for the artist to judge the build up of tonalities in very dark or solid areas. The harder charcoal crayons are less brownish in hue than are the softer ones.

In processing, we found that images drawn with charcoal crayons require slightly hotter etches than those drawn with standard crayons (an additional two or three drops of nitric acid per ounce of gum arabic).

The cost of making 36 lithographic charcoal crayons from medium charcoal sticks was very low: a total of \$9.38 (including charcoal, carnauba wax and stearic acid), by comparison with \$16.56 for an equal number of Korn's crayons. □

JEAN CHARLOT (continued from page 8)

liked was printed directly from a linoleum block carved by Jean Charlot. Original prints used for mundane purposes can, therefore, in the right hands, have a much stronger effect on their viewers than reproductions. In using hand-drawn lithographs for such ends, Charlot is a 20th-century innovator.

Charlot made 59 prints in his last three years, following the publication of the catalogue raisonné of his prints. Two of the last were large color lithographs. Both are large prints; both have subjects from Fiji, where Charlot painted a mural some years ago. Both are heavily drawn, and both are printed in four colors. *On the Go*, a portrait of a Fijian nun on a pilgrimage, was drawn on stone as a demonstration for students at the University of Hawaii. The other, *Warrior*, was drawn on aluminum plates in Hawaii and sent to Los Angeles for offset printing under the supervision of Lynton Kistler. The visual difference between the two shows in a striking fashion the different ways in which Charlot employed the two processes.

One the Go is in dark colors: blue, brown, yellow, and black. The drawing, though strong, leaves areas of reserved white that set off the heavily-inked colors, leaving them dark and glowing. There is relatively little overprinting, and it never involves more than two colors together. The black stone is used for an outline, in a more traditional manner than that of the

artist's color-blend prints. The color richness and the compositional simplicity are typical of Charlot's best work on stone. The edition is 30 prints.

Warrior, on the other hand, is printed in the brightest of colors: red, yellow, chartreuse, and mauve. They clash with each other spectacularly and combine through overprinting to produce a whole range of secondary colors. The drawing is dense across the whole print; there are no white reserves at all. Done on stone, they would fuse into a dark unreadable mass. With offset, the dark figure of the warrior emerges from a background left luminous by the transparent inks. The outlines of the figure are much more lightly drawn. The shape is formed mainly of colors, not of its outline, and the lines are there to add surface detail. The edition is 150. The two prints, drawn in the same month, show more powerfully than words the extent to which Charlot understood and utilized the distinctive qualities of the offset and direct lithographic processes.

These brief words are about Jean Charlot the printmaker, the innovator. They do not deal with his iconography, nor with his historical place in the pantheon of French, Mexican, and American art. But if they should encourage another artist to look more closely at Charlot's contributions to lithography, and to try something new on his own, then this will be a happy memorial for an artist and a friend. □

DIRECTORY OF SUPPLIERS

Listings in TTP's Directory of Suppliers are available to all manufacturers and distributors of materials and services appropriate to use in professional lithography workshops. Information regarding listings will be sent upon request.

Andrews/Nelson/Whitehead. 31-10 48th Avenue, L.I.C., NY 11101. (212) 937-7100. New Rives BFK in 280 gram weight (buffered), white and soft cream. Handmade and mouldmade printmaking papers in colors. Rolls. Large sizes. Custom watermarks. Acid-free mat boards and litho stones.

Charles Brand Machinery, Inc. 84 East 10th St., NYC 10003. (212) 473-3661. Manufacturers of custom built litho presses, etching presses, polyurethane rollers for inking, electric hot plates, levigators and scraper bars. Sold worldwide. Presses of unbreakable construction and highest precision.

Crestwood Paper Co. 315 Hudson St., NYC 10013. (212) 989-2700. Handmade and mouldmade printmaking papers. Somerset printmaking paper: mouldmade, 100% rag, neutral pH. Avail. white and cream, textured and satin finishes in 250 gr. and 300 gr. in asstd. sizes. Manufactured in England.

Evermon's Lithograph Stones. 249 Duns-muir St., Vancouver, BC, Canada V6B 1X2. (604) 224-7230. The alternative lithograph stone at an alternative price. 30 x 40 x 3" Grade A, \$495; Grade B, \$275. 24 x 36 x 3" Grade A, \$300; Grade B, \$200.

Famport Company. 476A-TP Merrick Road, Lynbrook, NY 11563. (516) 887-4231. New Hand papermaking kits complete with hardwood mould and deckle, pulp, cotton linters, size, couching cloths and instructions. Paperkit for 6 x 8½" sheets, \$16.00; for 8½ x 12" sheets, \$25.00; for 12 x 16½" sheets, \$35.00. Add 10% for shipping. Brochure for SASE.

Galaxy Industries, Inc. 27 Proctor Hill Rd., Hollis, NH 03049. (603) 465-2400. Durethane hand rollers, electro-hydraulic etching presses, Evermon air powered levigators. Plasti-Seal shrink packager systems, roll racks, plastic mailing tubes, publishers of *Graphics* magazine of Original and Fine Art Prints.

Glenn Roller Co. Dept. H. 2617 River Ave., Rosemead, CA 91770. (213) 283-2838. Lightweight hand rollers for printmaking, durometers from 20 to 75, all sizes available, chrome handles. Very high quality. A must for the professional.

Goes Lithographing Co. 42 W. 61st St., Chicago, IL 60621. (312) 684-6700. Ball-grained aluminum and zinc plates to your specs. Rental of hand-powered and power cylinder presses, stone or plate. Telephone Chris Goes for quotations.

Graphic Chemical & Ink Co. 728 N. Yale Ave., Box 27T, Villa Park, IL 60181. (312) 832-6004. Complete line of supplies for the lithographer. Rollers, all kinds and made to order. Levigators, grits, stones, tools and papers. We manufacture our own specially formulated black and colored inks.

Handschy Industries, Inc. 528 North Fulton, Indianapolis, IN 46202. (317) 636-5565. Manufacturer Hanco printing inks and lithographic supplies, including gum arabic, cellulose gum, etc.

Imago Handmade Paper Mill. 1333 Wood St., Oakland, CA 94607 (415) 465-4744. Custom handmade rag papers for printmakers, book printers and painters. Sample books of our custom stock papers are \$2 (swatch book) and \$10 (working sample book). Custom orders on request.

William Korn, Inc. 111 8th Avenue, NYC 10011. (212) 242-3317. Manufacturers of lithographic crayons, crayon tablets, crayon pencils, rubbing ink, autographic ink, asphaltum-etchground, transfer ink, music plate transfer ink; tusche in liquid, stick and solid form (1 lb. can).

Light Impressions Corp. 131 Gould St., Rochester, NY 14610. (716) 271-8960. Exclusive distributors of Kwik Print light sensitive color imaging materials. Complete line of archival framing products and materials. Free catalogue on request.

Printmakers Machine Co. 724 N. Yale Ave., Box 71T, Villa Park, IL 60181. (312) 832-4888. Sale of printmaking presses only. Sole manufacturer of Dickerson, Sturges & Printmakers litho presses. Quality presses, manufactured by skilled workmen, sold worldwide.

Rembrandt Graphic Arts. The Cane Farm, Rosemont, NJ 08556. (609) 397-0068. Etching and litho presses, yellow and grey litho stones, Hanco inks, Western Litho plates, KU rollers, printmaking paper, chemicals, solvents, tools. Relief, etching, litho and silkscreen supplies.

Daniel Smith Ink Co. 6500 32 NW, Seattle, WA 98117. (206) 783-8263. Complete needs for the professional lithographer including Hanco, Graphic Chemical and Dan Smith inks and supplies. Aluminum lithographic plates and artist papers at discounts. Distributor for Twinrocker papers.

The Structural Slate Co. 222 E. Main St., Pen Argyl, PA 18072. (215) 863-4141. "Pyramid" brand Pennsylvania slate stone: backing slate, slate plate supports.

Takach-Garfield Press Co., Inc. 3207 Morningside Dr. NE, Albuquerque, NM 87110. (505) 881-8670. Hand or electric operated lithograph presses. Hand operated etching presses. Inking rollers, hand levigators, automatic tympan and punch registration systems, polyethylene scraper bars and straps.

Twinrocker Handmade Paper, Inc. Brookston, IN 74923. (317) 563-3210. Custom handmade papers in any color, size up to 35 x 48". Watermarks, shapes, inner deckles, laminations, sizing. Visiting artists program. Custom paper pulp, cotton fiber, Howard Clark Hollander beater, hydraulic press.

Wepplo Press Co., Inc. 8412 Haeg Dr., Minneapolis, MN 55431. (612) 881-0982. Table model etching, manual or electric etching and lithographic floor models. Also electric hydraulic litho press. Accessories include scraper bars, color rollers, levigators, hot plates, sinks, acid bath. Brochure available.

Western Litho Plate. 3433 Tree Court Industrial Blvd., St. Louis, MO 63122. (314) 225-5031. Manufacturers of lithographic plates, chemistry and plate processing machinery. Many types of lithographic printing plates, both positive and negative working. Also lithographic chemicals, including finishers.



AN ANSWER TO JOSHUA KIND

by Jack Solomon, Jr.

BECAUSE OF THE NATURE OF LANGUAGE, it generally takes more words to respond to accusations than to make them. I originally prepared a two-part article in response to Joshua Kind. Because of space limitations, I am delivering for publication only what is essentially Part I of my essay. In it only ten of Kind's alleged "corruptions" can be rebutted. I begin:

Alleged "Corruption" 1: To quote Kind: "All, no exceptions, all, every Rockwell 'print' ever made or sold is, to use our own coinage, *FAUX-GRAPHIQUE*. That is these prints are all made by photographic reproduction from either a Rockwell painting or drawing."

The accompanying photograph depicts a hand drawn stone, one of two from which the Rockwell lithograph, *The Inventor*, was pulled. This lithograph is in no way a "photographic reproduction."

Here is how *The Inventor* was created: Norman Rockwell created the image as a drawing on paper. A technically skilled professional chromist (his name is Heine Bauer), using Rockwell's drawing as his guide, copied Rockwell's image *by hand* onto two stones, one separate stone for each color and tone value to be expressed in the finished lithograph. In creating the two stones, *no camera, mechanical separation or photographic process was utilized*. Proofs were then pulled from the hand drawn stones. The proofs were then examined and corrected by the artist. After Rockwell's corrections were made, another proof was pulled and submitted to the artist. Upon obtaining Rockwell's approval, the lithograph edition was pulled from the stones, one color at a time, at the Shorewood Atelier in New York City. An antique, French manufactured, flat bed lithographic press was utilized. Each print was hand pulled from the stones. Then each finished lithograph was inspected by the artist and hand signed by him. The stones were then effaced by an "X" across the entire image (see illustration).

The buyer of Rockwell's lithograph, *The Inventor* (as does every customer who purchases a fine art graphic published by Circle, whether by Rockwell or any other artist), receives with his print a "Print Documentation" form. This form, in addition to describing the limits of the edition, the disposition of the plates, the number of "artist's proofs" and other information required by the art print laws of Illinois and California, also contains a section of relevant technical information entitled "The

"The Corruption of Norman Rockwell," an article by Joshua Kind, was published in the Spring 1979 issue of TTP. In that article Kind was sharply critical of the Norman Rockwell prints published by the Circle Galleries. Jack Solomon, Jr., on behalf of Circle Galleries, and Mel Hunter, whose Mylar method lithographs were also discussed in Kind's article, have requested an opportunity to reply.

*TTP's editorial position is sharply opposed to the practice of publishing lithographs printed from stones or plates drawn by professional colorists (as Solomon states was done in the case of Rockwell's *The Inventor*, illustrated below), as well as to what we regard to be undesirable use of the Mylar method, resembling in many ways the chromolithographs of the 19th century. We shall continue to express our views on this subject.*

Meanwhile, in the interest of a continuing dialogue among professionals in the field, we are pleased to provide space for these replies.



Involvement of the Artist and the Printer." By merely reading the form, the buyer of *The Inventor* is informed that the Rockwell lithograph was created as above-described.

The question before us is not whether Rockwell himself drew the stones, whether the lithograph was created under his control and direction, or whether this Rockwell lithograph can be or should be termed an "original" lithograph. (The issue of "originality" is a valid one and I will touch on it later.) But the question to be examined here is simply whether or not, as Kind alleges, "all" Rockwell prints ("no exceptions") were created as "photographic reproductions" where photomechanical technology was used. The answer to this question is simply: NO!

From 1970 to 1976, under an exclusive contract with the artist, Circle published 79 editions of Rockwell lithographs. They were created essentially as described above for *The Inventor*. In all cases, either hand drawn stones or metal plates were utilized. (Mylar plates had not yet been discovered.) In 71 cases, all stones or plates were hand drawn by a professional technician (chromist). In eight cases, because of special individual effects which the artist wanted to achieve, some color plates, created by photographic separations, were used in addition to "key" hand drawn plates. The Rockwell lithographs were pulled at some of the most prestigious fine art lithograph ateliers in the world, including Fernand Mourlot (Paris), Desjobert (Paris), Guordon (Paris), Shorewood (New York) and the American Atelier (New York).

Rockwell decided to use an expert technician to prepare by hand the stones or plates for his lithographs, rather than drawing them himself, simply because Rockwell decided that the technician could do a better job than he could. Rockwell was not expert in the technology of lithography. He wanted the plates drawn by hand so that the finished lithographs would have the crispness, purity of color and pristine quality that only lithographs pulled from hand drawn plates possess. Rockwell created the artistic image, corrected proofs before printing, and personally inspected each finished print prior to signing it, so that he felt that his lithographs were prepared under his direction and control. Even after proofs were corrected, and then re-corrected and approved by the artist, if the final printed edition did not meet the artist's artistic standards, Rockwell rejected it; indeed, over the years of the Circle Contract, a good number of fully printed lithograph editions were shredded at Rockwell's direction because the results were below his standards.

Rockwell's use of a technician to prepare the

plates as described in Circle's print documentation, was and is the same practice used by many of the world's most renowned artists for numerous editions of graphics (Dali, Chagall, Calder, Braque, etc.). Kind himself raises questions in this regard for editions of "original" graphics by Calder, Chagall, Oldenburg, Albers and the Photo-Realists. However, in Rockwell's case, unlike almost all others, it was determined to disclose the technical means of production (see Circle's Print Documentations) rather than be silent, since silence could perhaps mislead or confuse the buyer. Silence was and is the most universal practice of many "Big Name" artists and publishers who use technicians other than the artists themselves to create plates, stones or screens for "original" graphics. Kind, in his article, acknowledges this pervasive silence by these artists and publishers, but because they belong to Kind's "high art" world, he labels them as "reputable"; he does not criticize their deception except to say that they are "more circumspect" in that regard than Circle, which does provide collectors with documented technical information.

Unlike the lithographs, all of Circle's Rockwell collotype editions were printed from photographically prepared plates. Circle's print documentation clearly discloses this. Even Kind, in his article, admits that Circle's collotype print documentation is forthright and accurate. Rockwell made quality collotype reproductions of certain complicated paintings because he determined that lithography would not communicate these images properly; he wanted these paintings to be reproduced exactly, via photography.

Alleged "Corruption" 2: Kind attacks Circle's print documentation for Rockwell collotypes because it states that the same plates used for the pencil signed limited edition of 295 (including proofs) were used in producing an "unlimited" edition of collotypes selling for \$20.00 per print. (The "unlimited" edition is distinguishable from the "limited" edition in that it is not pencil signed and numbered, and each "unlimited" collotype contains printing in the margins to prevent forgery). Kind curiously finds corruption here, because if collotype plates (being gelatinous) break down, then the unsigned editions are not really "unlimited." Therefore, he says, the print documentation is erroneous.

When I authorized printing Rockwell collotype editions, as a general rule I would contract with Jaffe (the Viennese collotype printer) for a first "run" printing of 1,000 prints, 295 for the limited edition (without printing in the margins), which Rockwell signed, and 705 with printing in the margins, which were to be sold

as "unlimited" editions. I instructed the printers to retain the plates; in case we sold the 705 \$20 *unlimited, unsigned and unnumbered* collotypes, I wanted to order additional collotypes without incurring new plate-making charges. It is true that collotype plates, such as the ones used here, can deteriorate after a run of about 3,000, and that new plates can be created from the photographic separations. Circle does not represent that \$20 Rockwell collotypes are rare, limited editions. They are designated "unlimited" editions because when the plates were made, they were not destroyed, and the limits of the edition had not been preset, i.e., an "unlimited" edition.

Where is the "corruption"? Kind's point, carried to its logical(?) conclusion, seems to be that Circle should advise the purchaser of a \$20 Rockwell collotype that it is a rare limited edition (not "unlimited") since collotype plates break down.

Alleged "Corruption" 3: Kind points with alarm to the current price of *Gaiety Dance Team*, a Rockwell limited edition collotype, which sells for about \$2,000. He grudgingly admits that he can find no "corruption" in the Circle print documentation which accompanies the collotype, since the print is described there "with absolute clarity" and the public is not misled. What can be wrong? He implies that this collotype is overpriced because (1) the same unlimited, unsigned edition of that collotype sells for \$20, and (2) in the autograph market, a scrap of paper bearing Rockwell's signature brings \$25. Logic according to Kind: These collotypes are not worth \$2,000, but only \$45 (i.e., \$20 plus \$25).

If I owned a Braque drawing which the artist had neglected to sign, would its value increase if I bought Braque's autograph for \$35 from Charles Hamilton, the autograph dealer, and pasted it onto the lower right hand corner of the drawing? In the marketplace of fine art, hand signed paintings, drawings and graphics almost universally command higher prices than similar unsigned works, even assuming impeccable attribution for the unsigned works. And, hand signed posters by almost every major artist (for example, Chagall) bring many times the price of unsigned posters, and this is so even where the signed posters have no predetermined limit.

Why certain works of art bring astronomical market prices while others do not is a fascinating subject. I suspect that, as with most works of art, the law of supply and demand has a lot to do with the price of *limited, rare, signed* Rockwell collotypes, and not the pronouncements of professors. Professor Kind would learn a lot about the real world of prices by reading Adam Smith.

Alleged "Corruption" 4: Kind's next finding of corruption is a Mel Hunter lithograph which he examined while visiting our gallery. He says that it "... appears to the eye to be a photo-reproduction of a fairly complex painting ...". Perhaps it so appears to Mr. Kind's eye. But I wonder how educated a beholder Kind can be. To the eye of a person with only a modicum of knowledge about fine art lithography, this particular print can be nothing but a marvelously executed *original lithograph*. The values, shadings, textures, printing, ink deposits and colors are clearly "lithographic" and certainly not painterly.

And so they should be! *No painting of that print has ever existed*. In creating this lithograph, Mel Hunter drew by hand directly onto Mylar plates, one plate for each color, *de novo*. So there is no possibility whatsoever of the truth of Kind's implication that the plates for the Hunter lithograph were made by photographing an existing painting.

Alleged "Corruption" 5: Kind quotes Circle's print documentation, which discloses that Hunter's plates for this lithograph are Mylar. Kind read (or perhaps misread) Hunter's article in *American Artist* (October, 1977) on how Mylar plates can be used for fine art lithography, and he characterizes Hunter's lithograph as "an intermediate example of the *on-going corruption* (and perhaps ultimate future decay) of fine art printmaking and its gradual subsumption by photography or photographically supported processes." Kind continues "... The only 'traditional (fine art)' aspect here appears to be that the plates are hand-linked with a litho-roller, and the editions may be small."

Kind is mistaken. Here are just a few of the "traditional" fine art aspects involved in the making of Hunter's lithograph: (a) the artist drew each plate by hand, (b) no camera or other similar instrument was used to duplicate a pre-existing painting, (c) no dot structure or mechanical separation process was used to make the plates, (d) the edition was printed one color at a time by separate passes through the press, (e) the edition was hand fed, and hand pulled, on an antique French flat bed press, (f) the artist was present, "burning" and "manipulating" the plates as part of the creative process, (g) the artist inspected and hand signed and numbered each example in the edition.

Alleged "Corruption" 6: According to Kind, only lithographs pulled from stones are "Fine Art Lithography."

Of course, Mylar plates differ from Bavarian limestone plates. But isn't Kind's argument

Jack Solomon, Jr.,
is founder and
Chairman of the
Board of Circle
Fine Art
Corporation.

akin to attacking a car because it's not a buggy, or attacking penicillin because it's not chicken soup? Mel Hunter knows all about Bavarian limestone, and he has created numerous lithographs by that method. He happens to find that his artistic expression is better served, and that he can create a superior, artistically valid fine art print by using Mylar plates. Circle, as his publisher, accedes to the artist's methods, supports his creative experimentation, and is proud to publish his resulting fine art lithograph. We happen to believe that the artist should use the tools; the tools should not use the artist.

Alleged "Corruption" 7: Kind asserts that Mel Hunter's Mylar plate making process ". . . is precisely the process used by commercial professional offset printers to produce their printing plates" (emphasis added). Kind, even after reading Hunter's article, does not fully understand the use of Mylar plates; moreover, he obviously does not fully comprehend how plates are made for use in commercial lithography. In commercial color lithography printing, usually a *photograph* of art work is made with a camera. The photograph is then broken down by a separator (some separators are made by expensive laser beam machines), into the photograph's component primary colors (usually three, sometimes four). Color, tones and shades are achieved in the commercial print by the use of tiny dots of the primary colors. When these dots blend together in the finished print, the eye sees only the illusion of certain colors (a blue dot plus a yellow dot shows green). In the Hunter Mylar method, *plates are drawn by hand*, one plate for one color. The colors of Hunter's finished print are not the dots of commercial lithography, but *pure* colors derived from the inks. There are numerous other dissimilarities in the plate making process between commercial lithography and the Hunter hand drawn Mylar plates, but since Kind is so uninformed as to basic fundamentals, and concluded that the two processes are, as he puts it, "precisely" the same, why bother to point out many other differences?

Alleged "Corruption" 8: Kind opposes Mylar plates for original lithographs because ". . . there is no physical reason that the edition cannot be continued . . . ad infinitum, or even ad nauseum."

Kind asserts that the only true lithographs are those pulled from stones. Lithographs pulled from stones (although usually limited to editions of under 300) could be pulled by competent artisans to an edition of 50,000 or even more, with no discernible loss of the stone's ability to print the 50,000th lithograph as accurately as the first lithograph. So why is Kind

concerned that Mylar plates are also capable of producing large editions, unless, of course, his purpose is to confuse?

Alleged "Corruption" 9: Quoting Kind: Prints made from Mylar plates are not "'fine art' lithography where by my definition (and several others as well, including the Print Council of America), you have to touch that surface and manipulate that messy and mysterious stone."

It amuses me that a Professor of Art, who throws stones at others because of allegedly improper use of terms, can himself play so fast and loose with the English language. Does Kind mean to equate his definition of the term "*fine art lithography*" with the term "*original lithography*" or "*original print*"? Kind can define "*fine art lithography*" as he wishes, since "when I use a word," Humpty Dumpty said, in a rather scornful tone, "it means just what I choose it to mean, neither more nor less." But I am mystified about the Professor's reference to the Print Council of America, and to several unnamed "others." I am not aware of the Print Council publication attempting to define "*fine art lithography*," and, of course, I wouldn't know if the mysterious "others" have ever attempted to define *that* term. Perhaps Kind means to refer *not* to definitions of "*fine art lithography*" but to definitions of "*original print*."

If this definition is what Kind means to quote, then he has misquoted; even that definition does not state that the artist must "touch that surface and manipulate that messy and mysterious stone." And, had Mr. Kind prepared a properly researched article, he could have interviewed any number of Print Council directors.

He would have discovered that the Print Council of America in recent years has evaded defining the word "original." They do continue to publish reprints of the Zigrosser book, on original prints, because the book produces needed revenue for the Council.

Zigrosser's "Print Council" by most experts' definition is recognized as too restrictive and conservative, and is considered "obsolete." Four years ago the Council met and attempted to formulate some guidelines for the industry on this matter. The result, a five page outline of recommendations, does not define "original print." Rather, it describes the dealers' responsibility thoroughly to describe and stand behind the prints which they sell; to define the degree of mechanical intervention in the process so that buyers can accept or reject the print according to the degree to which it satisfies their own concept of originality.

But what about the term, "original print"?

Trying to define this term is like trying to define "beauty."

Every book ever written on prints and the print market has a section which attempts to define an original print. And every book—with the exception of A Guide to the Collecting and Care of Original Prints, by Zigrosser—comes to the conclusion that it cannot be defined except in completely subjective and abstract terms. (Kenneth Knapton, Jr., Executive Director of the Graphics Society, in *Graphics*, November–December 1978.)

Almost unanimously, American experts on contemporary print making reject rigid definitions of "original." (See articles by June Wayne and Richard Field in *Print Collector's Newsletter*, May–June 1972.) Their position, and the position of the overwhelming majority of their colleagues, is that (1) the artist should not be inhibited in the creative process of print making by preconceived definitions of "originality"; and (2) the dealer and artist should disclose the technical means as to how the print was created.

If an artist wishes to employ assistants, advisors, technicians, photo-mechanical devices, computers, or even laser beams, to create unique or multiple works, including prints, that is the artist's inalienable right, whether . . . the Print Council grants it or not. But if the artist or distributor conspire to withhold, misrepresent, or distort important information regarding their processes or working relationship from the public, then someone might well be cheated.

Calvin Goodman, in *Marketing Art*, p. 103 (GeeTeeBee, 1972).

Mr. Kind says more about himself and irresponsible reporting than he says about his targets by his neglecting even to mention the current generally accepted view of the definition of "originality" by the contemporary print making community.

Alleged "Corruption" 10: Kind next turns to Circle's lithograph edition, *Nureyev*, by Jamie Wyeth. He says that the use of the phrase, "original lithograph," to describe this print would appear "fraudulent." Kind describes this Wyeth lithograph as follows: ". . . a Wyeth painting is reproduced here . . . possibly with a photographic separation of the three colors of the work onto Mylar sheets." This is yet another of Kind's misstatements. No three color photographic separation process was utilized.

Furthermore, as with other Circle fine art prints, a print documentation accompanies the Wyeth lithograph. The "involvement of the artist and the printer" is clearly set forth. Jamie Wyeth created a special working maquette, us-

ing flat colors, to guide him in preparing plates for this lithograph. Although aided technically by a chromist while preparing the Mylar plates (as disclosed in the Circle print documentation), Wyeth drew by hand on the Mylar plates, made corrections and additions directly to the plates, experimented with the colors and inks, attended proofings of the edition, and experimented with, tried, rejected, and then finally selected the inks and the papers. The artist was immersed in the project from start to finish. The finished print varies substantially from the artist's maquette. Based upon his experiments with the printers, Wyeth decided to do a second state *Nureyev* on black paper, which differs artistically from the first state. Kind's implication that the Wyeth plates were prepared photographically by three-color process separation is ridiculous. Because the involvement of the artist was so intense, and because the plates were made by hand, and because the pulling was done in the traditional manner on an antique French flat bed press, it is hard to perceive how anyone could contend that *Nureyev* is not an "original lithograph," even though the term is a subjective one.

More Rebuttal: Kind's statement that Richard Lindner's and Jamie Wyeth's lithographs for the Metropolitan Opera portfolio are not "lithographs" is false; his statement that Leonor Fini's serigraph for the Metropolitan Opera is a "collotype" is false; his conjecture as to why the Merrill Chase Art Galleries called a halt to sales of Norman Rockwell prints is misleading; his description of *pochoir* is essentially erroneous, etc., etc., and on and on (and quoting Kind) "*ad infinitum* or even *ad nauseum*."

In his opening remarks the author stated that this reply constitutes only the first part of a two-part reply to Joshua Kind. He offers to send the second part to any reader who requests it. To do so, write Mr. Solomon c/o Circle Gallery, 108 South Michigan, Chicago, IL 60603.

A REBUTTAL TO JOSHUA KIND by Mel Hunter

Mel Hunter identifies himself as an artist who has made lithographs exclusively: 83 editions on stone and Mylar since 1972.

IN JOSHUA KIND'S ARTICLE, "The Corruption of Norman Rockwell," (TTP, Vol. II, No. 2, Spring 1979) seventy-one lines are devoted to an analysis of my Mylar* hand drawn lithographic methods. Kind's statements are so wide of the mark factually that they do damage to the scholarship of art upon which all of us depend.

Joshua Kind writes, and Tamarind publishes:

In an article in *American Artist*, October 1977, "Revolution in Hand-Drawn Lithography," Hunter describes in precise detail, and pride, and with 25 photographs, the "Mylar method" which allows "anyone to do lithography" with no fuss.

Nowhere in my article, its title, subtitle or credit on the contributors page do the words or even the thought, "allows anyone to do lithography," appear. And nowhere do the words or even the thought, "with no fuss," appear. The introduction to the article is addressed to the artist-readers of that magazine who are already familiar with the basic problems all artists encounter in making art. I sum up with this statement: "But with the Mylar method, as I have called it, you (the artist) are immediately the master of the *creative* end of the medium, just as the printer is the master of the subsequent printing end."

That is the main theme of that very long and detailed "how-to" article, which describes an extremely advanced means of making an original hand drawn lithograph. There is plenty of fuss described, but it is made clear that the artist can devote most of it to the creative development of his image, with little worry about whether the printer can successfully, faithfully print the edition later.

Joshua Kind writes and Tamarind publishes:

In looking at the "lithographs" of one Mel Hunter, also published by Circle Gallery, I found the curious phrase "plated by contact" used—in the descriptive literature accompanying the print—to define the process by which his prints were produced. This literature avows that the "lithograph"—which is traditionally hand-signed and numbered in pencil and yet appears to the eye to be a photo-reproduction of a fairly complex painting of trees, twigs, shadows, shrubs and horses—is *not* a photographic reproduction, but "hand-drawn lithography." I mention this work, because it may be an intermediate example of the *on-going corruption* (and perhaps even the ultimate future decay) of "fine art" printmak-

ing and its gradual subsumption by photography, or photographically supported processes.

The "lithograph" Kind tries to degrade by bracketing like that is the thirteen-color, hand drawn, large, bleed lithograph, *The Patriarch* (illustrated). It took six hard weeks to draw its thirteen separate color images. It was three key drawings, two in crow-quill pen with Pelikan tusche, and one in Stabilo No. 8046 pencil. All thirteen drawings were plated by contact to positive-working plates with my direct participation.

Joshua Kind continues: "The artist here, as in photo-silkscreen, although he does prepare the image, does not touch the reproducing surface or literally create it." The truth is wholly, categorically different. This Mylar lithographic method bears no faintest similarity to photo-silkscreen. My procedure, during the many days of printing *The Patriarch*, was witnessed by scores of people at the American Atelier in New York. Once the plates were on the flat-bed press (direct, not offset), extensive hand-modifications of the images were carried out, solely by me. Areas of the image were weakened by abrasion with pumice, quartz sands and acids, by me. Areas were deleted altogether, by me. Areas were added by means of additive tusche and copper pencil, by me. As each color was proofed and printed on to the growing image on the whole edition, with no *bon à tirer* impression, each of the thirteen colors was visualized in my mind, and the ink mixed at my direction at the side of Circle's antique, flat-bed press. The print built up to its final appearance entirely without reference to any painting, maquette, color sketch, or any other prop which would narrow and predispose my creative effort on the press. I insist on making all my prints in this way, and have made no painting or maquette used for a print in years. At no time did anyone except myself, even the publisher, Circle, have any idea of the appearance of the final print.

I submit that the work I have just described is among the most difficult enterprises any artist could undertake; and that those of us who try such projects are enriching the experience of the whole art form, not harming it.

Some of us who make Mylar prints do so much hand alterations of the plate on the press that the images become almost unrecognizable from the Mylar drawing. Kind's statement that this platemaking process, as we now use it, is "*precisely the process used by commercial, professional offset printers to produce their printing plates*" is completely erroneous (emphasis added). Almost all offset litho shops in the country make negative-working plates from

*Mylar is a registered trademark of the E. I. duPont de Nemours Co.

negative hard-dot film. Very few American off-set shops have ever seen a positive-working plate, such as we use. Their technicians are completely unfamiliar with our soft-dot, semi-transparent pencil drawing on Mylar. And our plate-making procedures, which have been refined by a great deal of expensive and time-consuming experimentation, are foreign to both their experience and needs.

Joshua Kind writes and Tamarind publishes:

The Mylar method is really like camera-less photography—like contact-sheet printing: it is lithography only by virtue of the printing process, but it ain't "fine art" lithography where by my definition (and several others as well, including the Print Council of America), you have have to touch that messy and mysterious stone.

Kind is welcome to his own opinion confining "fine art" lithography to the image which comes from that "messy and mysterious stone," but he is in error in stating that the Print Council of America's famous definition, as it was formerly (but is no longer) put forward to define an original print, is in any way in agreement with him. That definition stated:

1. The artist alone has made the image in or upon the plate, stone, woodblock, or other material, for the purpose of creating a work of graphic art.
2. The impression is made directly from the original material by the artist, or pursuant to his directions.
3. The finished print is approved by the artist.

I see no statement that "you have to touch that surface." The definition says "make." My dictionary lists one hundred and fifty lines of definition for the word "make." Scores of them would fit the various means by which I make my printing image on the plate. And I see no reference that says I must manipulate that "messy and mysterious stone." Kind seems to disremember the words, "plate . . . woodblock, or other material." Well, I choose plates, and among them, whatever kind gives the best impression. So would almost any artist, without further ado. And I do touch the plate—the "original material" in the definition. In many cases, I do all the work to make my own plates from my Mylar drawings, and then make the same extensive image modifications to the plate as described above. My work fully complies with the Print Council of America definition, even if it had not long ago been de-emphasized by that body as overly restrictive.

Kind describes the use by me, and by extension all other artists, of these complex, incredibly sensitive and satisfying methods of making lithographic images as "on-going cor-



Mel Hunter comments: "Above is the thirteen-color hand-drawn lithograph, The Patriarch, 22½ by 30 inches, bleed four sides, which Joshua Kind says looks like a photo-reproduction of a painting. At the top of the page is an enlarged detail of the main crow-quill-drawn black key, showing cows, not horses, under the tree. Hand-drawing techniques are clearly visible on the print."

ruption" and even "the ultimate future decay of 'fine art' printmaking." Actually, along with splendid examples of traditional appearing lithographic images, a whole new kind of lithograph is emerging in the recent work of artists who are gaining experience with Mylar. Prints of almost unlimited colors, delicate tonal variation, and undreamed-of precision of editioning now come within the reach of artists, printmaking schools and one-man shops, as well as the big ateliers. The dominance of painting over full-color art is being narrowed, and as a consequence, the marketplace for such art, at print prices, is being spread across every level of society. If it becomes a people's "fine art" as well as a collectors' fine art, then so much the better for everybody. □

Hunter believes that "a whole new kind of lithograph is emerging in the work of artists who are gaining experience with Mylar."

I, LUDDITE
Notes on the
faux-graphique controversy
by Joshua Kind

THE LUDDITES were British stocking and textile workers in the early nineteenth century. They were so-named after their mythical leader, "Ned Ludd," when they reacted against the threat to their livelihood as handicraft workers—and perhaps their sense of personal dignity—which came from the arrival of the industrial revolution in their crafts. In so doing they gave their name to all of the machine-wreckers in our history.

At first it was not only that I thought of myself as a Luddite, but that I found I had adopted the attitudes of the intervening century and a half. It was embarrassing and even laughable to attempt to halt the flow of Western "progress." How pathetic and short-sighted it seemed to blame the machine for usurping one's sense of personal worth and the dignified relationship with human work.

But then I have come to understand the altered position of our present moment. Ned Ludd and his followers are no longer universally looked upon as an embarrassment with their "archaic" understanding of work. The Luddites may now stand, perhaps as Cézanne said of himself, as the "primitives" of the "new," i.e., our now well-evolved conceptions of the alienating forces that lie within the exploitation of machine-culture. If *faux-graphique* represent a confusion—whether deliberate or not—and a diminishment of the sense of art, then such printed works can only add to the streams of self-doubt that confound our larger society. Any lessening of the value of *personal* human achievement is but another access to alienation.

To quote myself (permissible enough in the *ad hominem* atmosphere engendered by the Kind/Solomon/Hunter debates), once the game of *faux-graphique* has been begun, it is endlessly fascinating. And as this game is meaningful, therefore it should be played. Last month, the American Express Company sent out an enclosure with its monthly mailing: ". . . a classic work of art from Walt Disney

studios . . . created in a *new art form* . . ." (all italics are mine). Reading on we learn that it is "an *original* serigraph cel on Mylar," *Mickey Mouse and Pluto*, published in an edition limited to 9,500, 9,000 exclusively for members; the 500 remaining are reserved for patrons of Circle Galleries (Mr. Solomon's establishments). It is a *new art form* because it is a "serigraph cel printed on Mylar," and yet, we are told, "serigraphy is an ancient form developed in China centuries ago, Disney has applied this *ancient* art form to Mylar, thus creating a *new art form* . . ." Further on in the text the new art form has become an "important collectible" as well as "a piece of movie history." Nowhere is it clearly stated in this literature—even Mr. Solomon would have to agree—that the literal thing in hand is, after all is said and read, only a reproduction of a cel (which is, incidentally, a hand-drawn image on a transparent surface from which an animated movie is made). The nearest approach to a representation of what is being offered is the double-talk: "and just as an original print is signed by the artist, each serigraph bears the distinctive Disney Studios seal."

My academic and unworldly mind, usually disinterested in the machinations of commercial enterprise, is forced to pay attention. Ask not for whom the *faux-graphique* tolls, it tolls for thee. Beyond any fun, this is a subject for consideration by all those who are interested in "Art." Why, I ask, did both Hunter and Solomon get so unwrought by an article that appeared in specialized publications, where it would be read only by a handful, and where the overlap between this specialized audience and Rockwelliana is probably so small as to be nonexistent? Hunter's misconstrual of my attitude is seen when he labels the discussion as my "attempt to influence the judgment of the art market." **Not the market, but the meaning is the issue.**

A FEW REMARKS about individual corruptions:

Corruption 1: In detail, I am of course wrong in that not all of Rockwell's prints are photolithographic reproductions—but then don't I "win" in principle? Now we know that Rockwell's lithographs are *hand-made* reproductions; *The Inventor*, Solomon tells us, *was drawn on the stone by Heine Bauer*. Solomon's self-righteousness is charming. Does his Circle Gallery documentation really "describe" the process so clearly set out by our understanding that *chromist* is equivalent to *copier*? After all, the print documentation sheet for *Settling In* (as an instance), released by the

Joshua Kind is contributing editor of *The New Art Examiner* and a member of the faculty at Northern Illinois University.

gallery in August 1978, offers only the following as "Involvement of Artist with Printer":

The artist created the image as a drawing on paper. The image was then transferred by a chromist by hand onto separate lithographic plates. . . Proofs were corrected and approved by the artist. . . Each print in the edition was inspected and signed by hand in pencil by the artist. . .

Not only is that linguistic obfuscation, but the gallery personnel with whom I spoke seeking clarification of the techniques implied by such verbiage usually did not understand the issues involved.

Incidentally, although I did say that the "high art world" was "reputable," my use of quotation marks in the original article supplied an innuendo which changed the drift of everything. To say that I do *not* criticize the deception of some certain aspect of graphic art in that other world is clearly to misread my remarks.

Corruptions 2 and 3: My point is lost in Solomon's reply. I am arguing indeed as a Professor—in the sense of a truthseeker, against falsity and unclarity. Let's say that I was trying to take away from the image of art as mystery—which I would like to preserve—some of its enslavement to irrationality. Solomon also misses the irony of his own assertion that a "Braque drawing which the artist had neglected to sign" is indeed a "signed" work. Even with Rockwell's signature on one of the lithographs drawn by a chromist there is still *no* work of art—market value notwithstanding. I am really Luddite enough to want a clear distinction between art and collectibles, e.g., the Walt Disney serigraph cels to which I have referred.

Corruptions 4 and 5: Of course there is a "painting" that exists of that Hunter print: it is the combinatory view of the several transparent Mylar sheets (i.e., not plates, as Solomon continuously refers to the Mylar drawing surfaces). I wonder why neither Solomon nor Hunter ever refers to my assertion—whimsical and academic though it may be—that the latter's work is really like the cliché-verre, brought up to date, as it were. The "painting" is on the Mylar sheet; the artist did *not* draw each plate by hand; each was "plated by contact," to use the precise yet cloudy phrase (cloudy, that is, without further explanation) found in the accompanying literature. My point and assertion of camera-less photography" and my analogy to contact printing a la cliché-verre is never referred to in either rebuttal. (See their comments on Corruption 7.)

IF IT REALLY IS THE CASE that both Solomon and Hunter believe what Hunter says in his last two paragraphs, then why did I have to scratch around and through the apparatus of commercial sales talk to arrive at a clear understanding of these processes? Would I have had any argument at all if there had been clear disclosure of the nature of the technical processes used. Such words and phrases as *plated by contact*, *chromist* and *maquette made by the artist* do not go far to explicate the nature of the work for the prospective purchaser who, even if he does not care at all, has the right to be fully informed.

Corruption 8: Stones and plates can be read interchangeably for my argument. What appears not to be interchangeable is a *hand drawn* image on a stone or plate; such a hand-drawn image is synonymous with the printing surface; when the stone or plate is regained the image no longer exists. With the Mylar method, even after destruction of the printing plate, the image still survives on the Mylar sheets and may be contact-printed (i.e., photographed) on other printing plates. Is this only a philosophical distinction? Or is it a very real one?

In thinking about the last two corruptions mentioned by Solomon, I am inclined to ask whether if these same works—the Wyeth *Nureyev* for instance—were to be photo-etched and then printed from an intaglio plate, would we then accurately call them "etchings," keeping in mind the traditional qualities that we think of when we use the word "etching." Ultimately, what I would wish to establish is a series of terms that would serve clearly to distinguish graphic works made traditionally (i.e., printed from plates hand drawn by the artist) from all those made in "newer" manners. It is not the printing surface that is at issue; it is rather how those images get on that surface. When well-known artists are involved, it is clearly an exploitation of their reputations to present them as "printmakers" when *literally* a reproduction of their already published work is the final product of their collaboration with a publisher. □

It is not the printing surface that is at issue; it is rather how those images get on that surface.

TUSCHE WASH: Expressive Development and Alternatives by John Sommers

THE EXPRESSIVE QUALITIES of tusche wash have long fascinated artists working in lithography. Although in the first half of the nineteenth century most artists' lithographs were drawn with crayon, the later years of that century saw many fine lithographs executed primarily or entirely in wash. James McNeill Whistler, beyond all others, developed great virtuosity in the use of washes, working in collaboration with the English printer, Thomas Way. The specialized technical approaches developed by Whistler and Way involved use of delicate tusche washes on polished stone. These washes were subsequently processed, acid-bitten, scraped, re-applied, and the process was repeated until the merging tonalities yielded an atmospheric image of great sensitivity.

While throughout the first half of the twentieth century, most lithographs were still drawn in crayon, tusche wash techniques found increasing use both in France and the United States. In France, Georges Rouault, Marc Chagall and Joan Miró; and in the United States, Arthur B. Davies, George Bellows, Rico Lebrun and Eugene Berman used tusche washes in a variety of ways. The principal collaborating printers were Mourlot and Desjobert in France, and Bolton Brown, George Miller and Lynton Kistler in the United States.

Above all others, Pablo Picasso was the master of wash techniques, achieving an unparalleled restraint and control in his lithographic masterpiece, *La Colombe* (1949). As one looks at this lithograph with an understanding of the technical complexities of zinc, when used in combination with tusche, and as one realizes the problems created by Picasso's use of both additions and deletions in creation of his image, there is no doubt in one's mind that Picasso's collaborating printer was truly a technical master. Neither can one doubt but that the technical proficiency of the printer was challenged and consequently sharpened by the demands of the master artist.

During the 1960's, in the earlier years of the Tamarind program in Los Angeles, a number of American artists were offered a unique opportunity to explore the expressive potential of tusche wash techniques. Among those who

found such techniques important in the development of their images were Sam Francis, John Paul Jones, Matsumi Kanemitsu, Nathan Oliveira, June Wayne, Dick Wray and Adja Yunkers. Just as Picasso's demands had served further to challenge the abilities of Mourlot, so the demands made by these artists served to challenge the Tamarind printers of those years, forcing them to expand their technical knowledge and hence to make possible a new aesthetic potential.

It was in 1971 that Leonard Lehrer made the first of his tusche wash lithographs at Tamarind Institute. The subjects were formal gardens. While the formats were relatively small, the drawings were broadly conceived, using highly controlled wash-shapes. Since then, Lehrer's drawings of landscape subjects and of building facades have become infinitely more complex. The increasing refinement both of his vision and of his drawing technique has brought about a parallel refinement of the technical processes required in realization of his lithographs.

In his 1974 lithograph, *St. Basil's Cathedral*, Lehrer began to divide the image into smaller wash shapes which lay side by side in construction of his image. Since that time he has even further refined his wash technique in such prints as *Puerto Vallarta* (1977) and *View of St. Petersburg* (1978). The landscape shapes and shadows have been fractured into many tiny, tusche-wash facets, closely juxtaposed. Lehrer's current lithographs, both large and small in scale, are composed of many small brush strokes of tusche wash; rich, deep values lie beside strokes of the greatest delicacy, intermixed and overlapped, so that this wide range of values is woven into a single wash-image.

The technical requirements of Lehrer's images—both in preparation of the washes used in his drawings and in the processing of his stones—have required concurrent refinement of the printer's methods. And such refinement of these methods has in turn suggested to the artist an even further refinement of his drawings. This experience provides but one example of the way in which an intimate and extended collaboration between an artist and a master printer results in an ever-continuing refinement

of the techniques used in the making of a lithograph. Leonard Lehrer has now collaborated with Tamarind Master Printer Wayne Kimball for more than eight years, first at Tamarind Institute, then in San Antonio, and now in Tempe, Arizona, where both are members of the faculty at Arizona State University. For a brief description of the methods used by Lehrer and Kimball in the preparation of washes, wash-application, and processing of the drawings, see Daniel Britton's account of their collaboration (following).

NOT ALL LITHOGRAPHERS who seek wash-like imagery have used traditional tusche techniques. Albert Christ-Janer, whose many brilliant lithographs have the look of tusche wash, actually used a grease-based tusche only in one instance while working at Tamarind. Christ-Janer's lithographs are characterized by flowing, wash-like patterns developed not with tusche but rather with non-lithographic materials under running water. He used a variety of resists, among them wax, as well as various sprays (both lacquer and paint). He usually could not know precisely what the rolled-up image would be like, but he took delight in the developing image as it emerged in a grease base after processing.

Robin Cohen, an undergraduate student in lithography at the State University of New York at Buffalo, has developed similar processes which, like Christ-Janer's, have a wash-like quality. Cohen, who studies at SUNY with John McIvor, has developed a process which provides a highly individual image. As a first stage in the development of her aluminum plates, she sprays lacquer from a pressurized can into a puddle of lacquer thinner. Because of the materials involved, her indirect drawing processes make for a direct, dependable and durable printing surface. Cohen's methods, totally different from those used by Lehrer and Kimball, are described in her article on page 27.

ARTISTS CONTINUE TO FIND creative stimulus in the drawing potential of tusche and of materials with similar aesthetic character. Printers continue to be interested in extending that potential by perfecting both materials and processes through which the artist's intent can be fully realized. Research currently in progress is aimed at fortification of traditional tusche washes against both the corrosiveness of etches and the abrasion caused by the buffing of gum films. Already some promise has been found in the addition of tiny amounts of polymer to tusche wash mixtures prior to drawing. There is no doubt that as printers perfect this approach, artists will extend its use and application. □



Leonard Lehrer testing tusche stock solution on bristol vellum.

WATER TUSCHE WASHES

Observations of Collaboration between Leonard Lehrer and Wayne Kimball *by Daniel Britton*

THE ARTIST BEGAN by filling several cans of LaFavorite tusche with distilled water until they were almost full; he then covered the cans loosely with their lids and allowed them to sit for two days to soften the tusche to working consistency.¹ Once the tusche was sufficiently soft, he stirred it with a brush until a thick, black, stock solution was obtained. The concentration of the stock solution was considered to be correct when a brush mark made on a clean, white piece of bristol vellum, laid down as an opaque, black mark.²

When an appropriate stock solution was obtained, three 5-ounce, plastic cups were filled approximately two-thirds full with distilled water. Three separate values of tusche wash were mixed in these cups, a dark grey, middle grey and a light grey, adding stock solution by the brush load. Each of these solutions was then tested by brushing it onto the vellum paper. Small swatches applied to paper produced washes very similar in appearance to those of a printed wash. When the desired reticulation, bloom, and value of these test solutions was achieved, each was strained

*Daniel Britton
is Assistant
Professor of Art
at Arizona State
University.*



Leonard Lehrer. *View of Warsaw*, 1978.



Detail of drawing, in progress on the stone.

through four layers of cheesecloth to remove foreign matter.

In final preparation for the wash drawing, a grey Bavarian limestone, finished with 320 carborundum grit, was set into drawing position and carefully leveled. The artist then laid out a very light preliminary drawing on the stone surface using a 5H pencil. Final tests of the prepared washes were made in the margins of the leveled stone.¹ When the wash test on stone corresponded to the preliminary test done on vellum, the artist, using a separate brush for each wash, executed the final drawing in tusche wash.

The Etch

AFTER CAREFULLY EXAMINING the washes, the master printer, Wayne Kimball, determined an overall etch which would stabilize, but not burn out the bloom of the weakest

(lightest) wash in the drawing.⁴ Rosin and talc were applied and after removing the excess, Kimball liberally applied the overall etch to the entire surface of the stone. As the etch thickened, he added fresh solution and with a brush, kept the etch material moving for a 10- to 15-minute period. At the end of this time he carefully buffed down the etch to a smooth, dry film, using a cheesecloth pad. Generally speaking, the stronger the weakest overall etch can be, the better will be the adsorbed gum film.⁵ The overall etch for the lightest washes in *View of Warsaw*, was determined by Kimball to be three drops of nitric acid per ounce of gum arabic. All other washes were then spot etched, one value at a time, with predetermined etch strengths.

The second major areas of value were those just slightly darker than those for which the overall etch was designed. The master printer felt that, in this case, four drops of nitric acid per ounce of gum were needed. After preparation, this etch solution was carefully painted only on the areas whose value was appropriate to that etch. Factors to be considered in selecting correct etch strengths are the warmth or coolness of wash, the density of reticulation patterns, the type of tusche used, the type of solvent used, and the darkness (or relative hardness) of the limestone.⁶

Again a determination was made of the next darkest value, and a calculation was made that a seven drop etch solution was needed to stabilize those areas. This etch was applied as was the previous spot etch. Finally, the darkest areas of the drawing received an etch strength of thirteen drops of nitric per ounce of gum arabic, applied as those before. It is important to note that in Kimball's procedure each of the separate spot etches is carefully painted on the stone until the image is literally re-drawn using a separate etch strength corresponding to the value of each area of tusche.

Once the entire drawing had received its first etch (which took the printer six hours in the case of *View of Warsaw*) the entire stone was covered with pure gum arabic and massaged gently until all the dried etch pools were back in liquid suspension. It was then buffed down with clean, dry cheesecloth to a uniform and very tight film. After fanning until the gum film was dry, the drawing was washed out with lithotine and rubbed up with asphaltum. When the asphaltum was dry, the stone was washed off with water and the image was rolled-up with ink. Kimball prefers to use Charbonnel Noir a Monter, without modifiers, for the roll-up as well as for proofing and printing.⁷ Within five or six inking passes, the image was developed to its original intensity. With the image completely



Wayne Kimball spot etching the stone.

inked, and after application of rosin and talc, the second etch was applied in essentially the same manner as the first. □

1. Normally, LaFavorite tusche should not need soaking or other special procedures to induce solution with water; due to inconsistencies in production, however, LaFavorite is sometimes either very slow to soften and dissolve, or it will clot in solution, or it will not dissolve at all without further assistance from another solvent. Where clotting occurs, the top layer of hard tusche should be removed, which usually serves to expose the soluble tusche. Where it will not dissolve at all, the addition of a few drops of isopropyl alcohol with the water will usually bring the tusche to solution in a few minutes. It is found, however, that addition of alcohol affects the tusche reticulation pattern, making it more irregular, with larger clumps, as compared to tusche reticulations made by the water material alone.—J.S.

2. It may be helpful to note that two cans of LaFavorite tusche produced stock solutions that were a brown-black in appearance. These cans were discarded in favor of the cans producing cooler, blue-black stock solutions. The brown-black solutions create washes greasier than normal and consequently create difficulty in accurate calculation of etch strength.

3. To provide an indication of the relative visual intensity of the value of the dried test washes on the stone margin, a value reading was taken with a Kodak 24-step grey scale. The readings, which included the value of the stone color, were approximately 1.7 in the darkest washes, 1.4 to 1.5 in the middle values and 1.0 to 1.1 in the lightest values.

4. TBL, Section 2.5, paragraph 6, page 61.

5. TTP, Vol. 2, No. 2, page 54.

6. Since there are those who may not have the best quality, grey limestone on which to do drawings, it is well to note that etch strengths used on light grey or hard yellow stones should be weaker than those described for the Lehrer drawing. In addition, the time the etch is left on an area and the volume applied are variables which must be considered in determination of the etch strength. That these spot etches are painted on and allowed to remain until after they are dry indicates two considerations, first, that they are formulated for a very slow chemical reaction, since they will remain in contact with the stone for an extended period, and, second, that the volume must be relatively small since in drying, the etch film must not craze over the wash surfaces.—J.S.

7. The washes, etched by Kimball in this method, have reached a highly desirable stability and can thus be rolled up securely with the very soft and greasy Charbonnel Noir a Monter.—J.S.

IMAGES PRODUCED DIRECTLY IN LACQUER by Robin Cohen

I HAVE BEEN EXPERIMENTING for two years with the use of lacquer as a direct means of producing imagery on aluminum plates. I am familiar with the use of polymers with an air brush, through which means a direct image can be achieved; but what I desire instead is to achieve a fluid, rather than a spattered effect.

I have found spray lacquer and lacquer thinner to be the most versatile materials in creation of an image on my plates. The washes I create adhere immediately to a new aluminum plate without counteretching. While lacquer sprayed from either a pressurized can or an airbrush leaves a uniform deposit of tightly knit dots, lacquer sprayed into puddles of lacquer thinner creates flowing, continuous tones, much like tusche wash. The tones of my lacquer washes are not reticulated but are consistent and crystal clear. When processed, these lacquer washes are stable and "what you see is what you get." Since the image is not grease based, but is entirely created in lacquer, the only chance of filling occurs as a result of an inadequately adsorbed gum-film formation or repeated dry roll. Because you by-pass one step (the exchange of grease for lacquer) processing errors, which cause image failure on grease based elements, are eliminated.

My basic imagery is developed by flooding the plate with lacquer thinner, then attacking the plate with a can of spray lacquer. The distance and angle from which I spray makes a difference in the image. I like to place my plate on a table and while standing above it, spray the lacquer from varying distances into the wet lacquer thinner. To preserve delicate puddle-tones and flow patterns, I simply allow it to evaporate; the directed flow of air through a hair dryer can, however, be useful in creating a subtle, sensual, wave-like imagery. In areas where I feel I have too much lacquer, I blot with a paper towel, sponge, fabric or other material with absorbent as well as textural qualities. Depending upon the material used in blotting, I can achieve textures ranging from stone, to wood or velvet. Usually this subtractive method gives me the image I desire.

In the initial preparation of the plate for drawing, or in preparation for the addition of shapes during drawing, I sometimes mask the non-image areas with gum arabic and Contact brand contact paper. I prefer to use gum arabic as a stop out under the Contact paper because the paper alone tends to leave undesirable traces of glue residuals on the plate. In addition, the Contact paper is useful when forming



Robin Cohen simultaneously creates her wash-like image and the base from which it is printed.



The image is developed by alternate drying of solvent pools and successive applications of lacquer thinner and spray.

a hard edge, since the diluted spray seeps through the edges drawn with gum alone. If at any point, crayons, pencils or other grease based materials are used in the drawing, the processing must include, beside the proper etch for the materials, the washing out of all the materials, both grease and lacquer, with Lacquer "C" Solvent; this must be done in order that the image may be put into a uniform lacquer base.

The following steps may be used in processing the plate drawn in lacquer only:

1. Talc should first be applied to the image and the first etch then applied and buffed down tightly with a cheesecloth pad. A two- to

three-minute etch will suffice, using either a commercial plate etch or four drops of phosphoric acid to one ounce of hydrogum. (At a pH of 3, this is closely equivalent to Tamarind's preferred plate etch mixture of 1/2 TAPEM-pH 2.5 to 1/2 gum arabic-pH 4.5. See TTP, Vol. 1, No. 2, p. 15—J.S.) Let this etch rest for 15 to 20 minutes. There is no need to roll-up the image prior to the second etch.

2. If the image is very light, I generally use pure hydrogum for the second etch. If the image ranges from a medium grey to black, the second etch should contain 2 to 4 drops of phosphoric acid per ounce of hydrogum. Since volume is a variable in etch strengths and my images are produced on large plates, I generally use 3 to 4 ounces of etch.

3. Buff down the etch film and allow the plate to rest for 20 minutes.

4. Using a lint-free rag, apply diluted ink over the image areas and buff it in as a printing base.

5. Wash off the plate surface with water. Because of the lacquer base, distilled water is not required.

6. Roll-up as is usual in normal lithographic procedures.

The amorphous imagery which I create through the use of lacquer has led me to search for a printing ground that is compatible. I have printed on fabrics, including satin, silk and taffeta. I use the plate as only one of the steps in my printing process. I have done multiple off-sets of the plate on fabric as large as eighteen feet in length. To create many diverse textures and subtleties in color tonality, I offset the image, not only from the plate, but also from the wet ink printed on other surfaces. □

THE USE OF LACQUER BASES IN PRINTING FROM STONE

by Jeffrey Sippel

ALTHOUGH LACQUER BASES ARE USED routinely in processing plates, considerable doubt has been expressed as to their value on stone. Stones are usually printed from a grease base (asphaltum), following the traditional methods employed since the earliest days of lithography. In an effort to determine the usefulness of lacquer in printing from stone, comparative studies have been conducted at Tamarind. In these studies similar crayon and wash images have been printed from both lacquer and grease bases at one time.¹

Several factors should influence the printer's decision whether or not to use lacquer as a base when printing from stone, among them the complexities of proofing, the size of the edition, the characteristics of the drawing, and the

printing inks to be used. If the image is to be printed in color, there is good reason to employ a lacquer base, as its use can ensure safer proofing and printing. The properties of lacquer, as well as the chemical and physical nature of grease reservoirs in stone, are important considerations in the printer's choice.

In his book, *Chemistry of Lithography*, Paul J. Hartsuch explains that lacquer is entirely suitable for use in hand lithographic printing because of its durability.² Lacquer bases have little tendency to break down under the friction and physical abrasion of proofing and printing, i.e., the movements of the sponge, roller and scraper bar. Lacquer also serves to protect the grease reservoirs from chemical burning by water during wash off, prior to roll up, or between impressions during printing, when the grease reservoirs are depleted. In addition, delicate crayon drawings or light washes are better protected from the acidity of a counter-

Jeffrey Sippel
completed study
as a Tamarind
Master Printer
in May, 1979

etch solution if put into lacquer before counter-etching.

The use of lacquer on stone has in the past been a controversial issue among printers. It has sometimes appeared that delicate tonalities become unstable when printing from lacquer, becoming sometimes lighter and at other times darker and coarser. We now believe that while the use of lacquer may entail some risk, the risk is less severe than is the case when printing the same image from a grease base. The problems that have been encountered derive less from the properties of lacquer than from the processing techniques of the printer.

The lacquers used in lithographic printing consist of organic resins dissolved in organic solvents which are spread on the printing element to a thin, tight film and fanned dry. Most of the solvent evaporates and leaves behind the resin, or dry lacquer, imbedded in and covering the grease reservoirs. The key to consistent and accurate printing lies in the chemistry of the grease reservoir and in the physical adhesion of the lacquer to the image. It is essential that solvent be used to remove *all* grease from the reservoirs before application of lacquer. If all grease is not removed there is a chemical imbalance in the grease reservoirs which may cause the image dots to grow or fill; it may also impair the ability of the lacquer to bond to the reservoirs, and the image may then become blinded (water burned) due to lifting of the lacquer. Faulty application of the lacquer may also cause problems. If the lacquer is not thoroughly dry when the ink base is applied, the solvents contained in asphaltum and/or lithotine may attack it. The resultant weakening of the lacquer causes it slowly to deteriorate, progressively lifting from the image during rolling, proofing and printing.

The individual characteristics of ink must also be considered by the printer before deciding whether to use a grease or a lacquer base. When organic inks are used (including most blacks), a stone need not be processed in lacquer. Inorganic inks, however, tend to be more abrasive and are less well received by printing bases. Opaque white inks containing titanium dioxide and most metallic inks are especially abrasive. Some inks are susceptible to flocculation as a result of long press runs and may not transfer to stone properly.³ Inks containing a large amount of opaque white or transparent base, both commonly used in contemporary color lithography, are relatively poorly received by print bases. Lacquer generally receives ink more readily than grease, indicating that it will be a more suitable base for such inks, especially when long edition runs are planned.

TO DETERMINE THE DIFFERENCES between stones counteretched, proofed and/or printed from grease and lacquer bases, the Tamarind study was controlled to reduce other variables. Delicate crayon and wash tones were drawn on a single stone, grained to the 240 grit surface normally used for these drawing techniques. Several such stones were made, ranging from a good, hard grey to a good, medium yellow. Each drawing was processed and rolled up with black printing ink, thus establishing it in grease; a fresh, tight gum film was then applied. A sheet of clear contact paper was placed over the entire surface of the stone. The contact paper was cut so that the center portion of the image remained covered while the outer portions (uncovered) were washed out and processed with lacquer: one side with blue lacquer, the other side with red. The two lacquers used in this study are those currently used at Tamarind. Both are commercially available: the blue lacquer is a product of Lith-Kem-Ko Corporation (Lith-Kem-Ko Deep Etch Lacquer "C"); the red lacquer is Titan Vinyl Lacquer, manufactured by the RBP Corporation of Milwaukee.⁴

After the lacquers had dried on the stone, the center portion of the image was uncovered and washed out. All three areas were then rubbed up with asphaltum, washed off, and rolled up in black ink before proceeding to print them in color. When the stones were rolled up, little or no difference in tonalities was visible among the three printing bases. Although there is an initial difference between the receptivity of the bases to black ink, this difference disappears after a few impressions are pulled, leaving virtually no variation among them. Slight variations are, of course, to be expected if different stones are used.

After the stones were processed and proofed in black, they were printed with color inks containing a large portion of either opaque white or transparent base. The lacquered areas rolled up almost immediately upon contact with the roller, while the grease base portion lagged behind. Lacking the favorable properties inherent in black ink, these inks prove to be much less compatible with a grease base. In some cases, losses from printing with a grease base were minimized after several impressions were pulled (these were crayon drawings); in other cases, however, losses continued throughout printing because of the lack of ink-receptivity of the grease base, which in turn led to water burning of the image.

A second problem in use of inks of light value—those containing considerable white or transparent base—is the difficulty encountered in discerning fine tonal values which can be

NOTE:

Because of their highly toxic properties, precautionary measures should be taken when working with lacquer and its solvents. Always use exhaust systems and respirators.

Lacquer is the preferable base for the printing of fine images from stone in inks containing white or transparent base.

easily seen when using darker inks. It should be noted that the Tamarind tests were made on small stones and that washoff time was therefore minimal. Extreme care must be taken when working with delicate imagery on large stones because there is a greater risk of burning the drawing during washoff.

Further tests were conducted on stones proofed in black, then counteretched and drawn into again.⁵ After the additions were made, the stones were again processed in black ink. They revealed essentially no variation in tonalities, whether in grease or lacquer base.

We conclude on the basis of this study that lacquer is the preferable base for the printing of fine images from stone in inks containing white inks and/or transparent base. Darker inks and stable, organic inks can easily be printed from a

grease base, provided that there is proper control during washoff. If a printer chooses to process stones with lacquer, extreme care and fine critical judgment during processing are essential to good results. □

1. Adams, Ben Q. "Printing from a Lacquer Base," *TTP*, Vol. 1, No. 3 (January 1975), pages 30-31.

2. Hartsuch, Paul J. *Chemistry of Lithography*, (2nd edition, 1961), page 31.

3. Hartsuch, page 313.

4. The Deep Etch Lacquer "C" contains vinyl resin in ketones and aromatic hydrocarbons; Titan Vinyl Lacquer contains vinyl chloride, dibutyl phthalate and plasticizer in xylene, diacetone alcohol, isophorone and ketone (with rhodamine B dye).

5. The counteretch that was used contained ¼ teaspoon of citric acid in 10 ounces of distilled water; it was applied three times for one minute each.

LITHOGRAPHIC CHARCOAL (continued from page 9)

6. Place the charcoal sticks on a soft, absorbent cloth and tumble them to blot off the hot liquid saturant adhering to their surfaces. Wipe each stick with a soft cloth to insure that no congealed saturant remains which might cause the drawing to misprint.

7. When at room temperature, each stick should be marked from end to end with a toothed wheel or scratched with a sharp metal point along one side so as to distinguish it from standard, untreated charcoal which is identical in appearance.

8. When cool and marked, the crayons are ready for use by the artist.

compressed charcoal consists of stearic acid (20 oz.) and carnauba wax (5 oz.). The temperature can again be between 250° and 275° in the absence of soap.

1. A brief description of lithographic charcoal (including the formula for the No. 730 crayon) was published by Mr. Phillips as an appendix in *Jean Charlot's Prints* by Peter Morse (1976). It was at Mr. Morse's suggestion that we first began our correspondence with Mr. Phillips, leading to publication of the present article. We express our deep appreciation to Mr. Morse for this and other courtesies.—Ed.

2. The no. 730 crayons were used by Jean Charlot and other professional artists, as well as by students in Mr. Phillips' classes, beginning in 1934. He has continued to make these crayons and to supply them to artists into the 1970s. The no. 224 and 721 crayons were used in classes at Iowa State University and San Jose State University between 1934 and 1943; Mr. Phillips has also continued to supply the 721 crayons to artists.

3. Sources of supply suggested by Mr. Phillips include the following: **Compressed charcoal.** Grumbacher V49-5 (hard); A. W. Faber, Castell 2899, no. 5 Siberian charcoal; Conté à Paris, Blazy-Conté-Gilbert, no. 2359, no. 4. **Carnauba wax.** No. 1 yellow, Eimer & Amond, New York. **Stearic acid.** Triple pressed no. 1614 in one lb. containers, distributed by Robinson Laboratory, Inc., San Francisco, CA 94107.

Crayon Formulas

No. 730 lithographic charcoal crayons:

These crayons are made from the hardest variety of charcoal. The saturant for 36 sticks of charcoal is composed of stearic acid (17 oz.), castile soap (1.6 oz.) and beeswax (1.4 oz.), and is prepared in accordance with the procedures given above.

No. 224 lithographic charcoal crayons:

A somewhat softer charcoal may be used than that selected for no. 730 crayons. If a charcoal of reasonable hardness is not available, the amount of carnauba wax may be increased to a maximum of ten ounces. The saturant for 36 sticks of medium grade charcoal contains stearic acid (20 oz.) and carnauba wax (5 to 10 oz., see above). The procedures remain the same except as they apply to castile soap and beeswax. The temperature can be between 250° and 275° in the absence of soap.

No. 721 lithographic charcoal crayons:

These crayons are made from dense, compressed charcoal obtainable in round sticks. It is made in a range of hardnesses. The saturant for 24 sticks of

Tamarind Tests

THE MATERIALS PURCHASED for use in Tamarind's tests of the lithographic charcoal crayons described by Mr. Phillips were obtained locally in Albuquerque.⁴ They differed somewhat from those that he describes. Charcoal sticks (hard, medium and compressed) were obtained at a local art supply store. Stearic acid (triple pressed) was available in solid form. The carnauba wax used in our tests was in li-

4. Tamarind's tests were conducted in May and June, 1979, by Tamarind Master Printer Jeffrey Sippel.

quid form, which posed a problem because of its reluctance to mix with stearic acid at higher temperatures. We assume that carnauba wax in paste form would mix more readily. Use of liquid wax prolonged the process of making the crayons because temperatures of 150° to 200° were required until the oxygen was released and the wax completely mixed with the acid.

No other problems were encountered in making the crayons in accordance with Mr. Phillips' procedures. The saturants were heated outdoors. We repeat and underline Mr. Phillips' warning with respect to the dangers of fumes in inadequately ventilated spaces. We did not test the formula (No. 730) that makes use of the hardest variety of charcoal and requires addition of beeswax and castile soap to the saturant.

We were very pleased with the characteristics of the charcoal crayons that we made. They work well on stone and have less tendency to scumble from build up of crayon than do the standard Korn's crayons. Their tonalities are soft and delicate, and resemble drawing on paper. They can easily be sharpened in any pen-

cil sharpener (because of their excellent beam strength) and hold their points well.

Persons accustomed to standard crayons may be deceived by the tonalities that result when drawing with charcoal crayons. Drawings are brownish in hue, instead of the normal black, until they are processed and rolled up in ink. The artist must be aware of this characteristic and calculate tonal values accordingly. It may be difficult for the artist to judge the build up of tonalities in very dark or solid areas. The harder charcoal crayons are less brownish in hue than are the softer ones.

In processing, we found that images drawn with charcoal crayons require slightly hotter etches than those drawn with standard crayons (an additional two or three drops of nitric acid per ounce of gum arabic).

The cost of making 36 lithographic charcoal crayons from medium charcoal sticks was very low: a total of \$9.38 (including charcoal, carnauba wax and stearic acid), by comparison with \$16.56 for an equal number of Korn's crayons. □

JEAN CHARLOT (continued from page 8)

liked was printed directly from a linoleum block carved by Jean Charlot. Original prints used for mundane purposes can, therefore, in the right hands, have a much stronger effect on their viewers than reproductions. In using hand-drawn lithographs for such ends, Charlot is a 20th-century innovator.

Charlot made 59 prints in his last three years, following the publication of the catalogue raisonné of his prints. Two of the last were large color lithographs. Both are large prints; both have subjects from Fiji, where Charlot painted a mural some years ago. Both are heavily drawn, and both are printed in four colors. *On the Go*, a portrait of a Fijian nun on a pilgrimage, was drawn on stone as a demonstration for students at the University of Hawaii. The other, *Warrior*, was drawn on aluminum plates in Hawaii and sent to Los Angeles for offset printing under the supervision of Lynton Kistler. The visual difference between the two shows in a striking fashion the different ways in which Charlot employed the two processes.

One the Go is in dark colors: blue, brown, yellow, and black. The drawing, though strong, leaves areas of reserved white that set off the heavily-inked colors, leaving them dark and glowing. There is relatively little overprinting, and it never involves more than two colors together. The black stone is used for an outline, in a more traditional manner than that of the

artist's color-blend prints. The color richness and the compositional simplicity are typical of Charlot's best work on stone. The edition is 30 prints.

Warrior, on the other hand, is printed in the brightest of colors: red, yellow, chartreuse, and mauve. They clash with each other spectacularly and combine through overprinting to produce a whole range of secondary colors. The drawing is dense across the whole print; there are no white reserves at all. Done on stone, they would fuse into a dark unreadable mass. With offset, the dark figure of the warrior emerges from a background left luminous by the transparent inks. The outlines of the figure are much more lightly drawn. The shape is formed mainly of colors, not of its outline, and the lines are there to add surface detail. The edition is 150. The two prints, drawn in the same month, show more powerfully than words the extent to which Charlot understood and utilized the distinctive qualities of the offset and direct lithographic processes.

These brief words are about Jean Charlot the printmaker, the innovator. They do not deal with his iconography, nor with his historical place in the pantheon of French, Mexican, and American art. But if they should encourage another artist to look more closely at Charlot's contributions to lithography, and to try something new on his own, then this will be a happy memorial for an artist and a friend. □

DIRECTORY OF SUPPLIERS

Listings in TTP's Directory of Suppliers are available to all manufacturers and distributors of materials and services appropriate to use in professional lithography workshops. Information regarding listings will be sent upon request.

Andrews/Nelson/Whitehead. 31-10 48th Avenue, L.I.C., NY 11101. (212) 937-7100. New Rives BFK in 280 gram weight (buffered), white and soft cream. Handmade and mouldmade printmaking papers in colors. Rolls. Large sizes. Custom watermarks. Acid-free mat boards and litho stones.

Charles Brand Machinery, Inc. 84 East 10th St., NYC 10003. (212) 473-3661. Manufacturers of custom built litho presses, etching presses, polyurethane rollers for inking, electric hot plates, levigators and scraper bars. Sold worldwide. Presses of unbreakable construction and highest precision.

Crestwood Paper Co. 315 Hudson St., NYC 10013. (212) 989-2700. Handmade and mouldmade printmaking papers. Somerset printmaking paper: mouldmade, 100% rag, neutral pH. Avail. white and cream, textured and satin finishes in 250 gr. and 300 gr. in asstd. sizes. Manufactured in England.

Evermon's Lithograph Stones. 249 Duns-muir St., Vancouver, BC, Canada V6B 1X2. (604) 224-7230. The alternative lithograph stone at an alternative price. 30 x 40 x 3" Grade A, \$495; Grade B, \$275. 24 x 36 x 3" Grade A, \$300; Grade B, \$200.

Famport Company. 476A-TP Merrick Road, Lynbrook, NY 11563. (516) 887-4231. New Hand papermaking kits complete with hardwood mould and deckle, pulp, cotton linters, size, couching cloths and instructions. Paperkit for 6 x 8½" sheets, \$16.00; for 8½ x 12" sheets, \$25.00; for 12 x 16½" sheets, \$35.00. Add 10% for shipping. Brochure for SASE.

Galaxy Industries, Inc. 27 Proctor Hill Rd., Hollis, NH 03049. (603) 465-2400. Durethane hand rollers, electro-hydraulic etching presses, Evermon air powered levigators. Plasti-Seal shrink packager systems, roll racks, plastic mailing tubes, publishers of *Graphics* magazine of Original and Fine Art Prints.

Glenn Roller Co. Dept. H. 2617 River Ave., Rosemead, CA 91770. (213) 283-2838. Lightweight hand rollers for printmaking, durometers from 20 to 75, all sizes available, chrome handles. Very high quality. A must for the professional.

Goes Lithographing Co. 42 W. 61st St., Chicago, IL 60621. (312) 684-6700. Ball-grained aluminum and zinc plates to your specs. Rental of hand-powered and power cylinder presses, stone or plate. Telephone Chris Goes for quotations.

Graphic Chemical & Ink Co. 728 N. Yale Ave., Box 27T, Villa Park, IL 60181. (312) 832-6004. Complete line of supplies for the lithographer. Rollers, all kinds and made to order. Levigators, grits, stones, tools and papers. We manufacture our own specially formulated black and colored inks.

Handschy Industries, Inc. 528 North Fulton, Indianapolis, IN 46202. (317) 636-5565. Manufacturer Hanco printing inks and lithographic supplies, including gum arabic, cellulose gum, etc.

Imago Handmade Paper Mill. 1333 Wood St., Oakland, CA 94607 (415) 465-4744. Custom handmade rag papers for printmakers, book printers and painters. Sample books of our custom stock papers are \$2 (swatch book) and \$10 (working sample book). Custom orders on request.

William Korn, Inc. 111 8th Avenue, NYC 10011. (212) 242-3317. Manufacturers of lithographic crayons, crayon tablets, crayon pencils, rubbing ink, autographic ink, asphaltum-etchground, transfer ink, music plate transfer ink; tusche in liquid, stick and solid form (1 lb. can).

Light Impressions Corp. 131 Gould St., Rochester, NY 14610. (716) 271-8960. Exclusive distributors of Kwik Print light sensitive color imaging materials. Complete line of archival framing products and materials. Free catalogue on request.

Printmakers Machine Co. 724 N. Yale Ave., Box 71T, Villa Park, IL 60181. (312) 832-4888. Sale of printmaking presses only. Sole manufacturer of Dickerson, Sturges & Printmakers litho presses. Quality presses, manufactured by skilled workmen, sold worldwide.

Rembrandt Graphic Arts. The Cane Farm, Rosemont, NJ 08556. (609) 397-0068. Etching and litho presses, yellow and grey litho stones, Hanco inks, Western Litho plates, KU rollers, printmaking paper, chemicals, solvents, tools. Relief, etching, litho and silkscreen supplies.

Daniel Smith Ink Co. 6500 32 NW, Seattle, WA 98117. (206) 783-8263. Complete needs for the professional lithographer including Hanco, Graphic Chemical and Dan Smith inks and supplies. Aluminum lithographic plates and artist papers at discounts. Distributor for Twinrocker papers.

The Structural Slate Co. 222 E. Main St., Pen Argyl, PA 18072. (215) 863-4141. "Pyramid" brand Pennsylvania slate stone: backing slate, slate plate supports.

Takach-Garfield Press Co., Inc. 3207 Morningside Dr. NE, Albuquerque, NM 87110. (505) 881-8670. Hand or electric operated lithograph presses. Hand operated etching presses. Inking rollers, hand levigators, automatic tympan and punch registration systems, polyethylene scraper bars and straps.

Twinrocker Handmade Paper, Inc. Brookston, IN 74923. (317) 563-3210. Custom handmade papers in any color, size up to 35 x 48". Watermarks, shapes, inner deckles, laminations, sizing. Visiting artists program. Custom paper pulp, cotton fiber, Howard Clark Hollander beater, hydraulic press.

Wepplo Press Co., Inc. 8412 Haeg Dr., Minneapolis, MN 55431. (612) 881-0982. Table model etching, manual or electric etching and lithographic floor models. Also electric hydraulic litho press. Accessories include scraper bars, color rollers, levigators, hot plates, sinks, acid bath. Brochure available.

Western Litho Plate. 3433 Tree Court Industrial Blvd., St. Louis, MO 63122. (314) 225-5031. Manufacturers of lithographic plates, chemistry and plate processing machinery. Many types of lithographic printing plates, both positive and negative working. Also lithographic chemicals, including finishers.

