

Theorem Painting

BY GREGORY LEFEVER

CONSIDERED A SIGN OF GENTILITY IN THE EARLY AMERICAN HOME, THIS BEAUTIFUL STENCILED ARTWORK STILL APPEALS TO NEW GENERATIONS OF ARTISTS.



ABBY ALDRICH ROCKEFELLER FOLK ART MUSEUM, THE COLONIAL WILLIAMSBURG FOUNDATION

This colorful peacock perches on a flowering branch in this early-19th-Century theorem painting by an unknown artist.

A convergence in the early 1800s of specific economic, social, and artistic trends caused the popularity of theorem painting to soar in America. As if overnight, these delicate, brightly colored stenciled images of fruits and flowers came to represent a new symbol of gentility for a new nation.

In the decades following the Revolution, the young United States continued its shift from a colonial rural economy to a more prosperous urban one. With greater wealth, Americans eagerly sought the trappings of culture. Borrowing from European models, one proven sign of refinement was an appreciation of art—especially gracing the home with pleasing needlework and paintings.

The nation's young women benefited greatly from the growing economy and cultural interests. Relieved from some of the toils of homemaking, many were able to pursue the decorative arts in new academies and seminaries across the land, where they learned the skills of a social hostess. Theorem painting became especially popular, and the budding artists soon displayed this stenciled artwork in their homes for all to appreciate.

Theorem painting today faithfully retains the charm of its early origins. While the number of artists creating theorem paintings has dwindled, the paintings themselves remain popular in homes featuring period décor. Four of the country's foremost theorem painters—Linda Lefko, Linda Brubaker, Nancy Rosier, and Sandra Coldren—are featured here, providing insights into this captivating art form.



ANCIENT ORIGINS

In its simplest sense, a theorem painting is artwork created with layered stencils. The types and colors of paints might vary and can be applied to an array of different materials. Subject matter can cover a wide range. Only the use of stencils is essential. In fact, to the historic purist, the word “theorem” means “stencil,” not “painting.” Calling a theorem painting simply a “theorem” is a more modern convention.

Yet there is nothing modern about its origin. Stenciled artwork is as old as human civilization, extending back to the Upper Paleolithic era, nearly 40,000 years ago, with hand tracings on the walls of caves. Stenciled art adorned the tombs of Egyptian pharaohs, and Pompeii’s ruins revealed astonishingly intri-

cate stenciled walls. Ancient Chinese and Japanese artisans brought stenciling to new heights of artistic splendor, from detailed designs on temple walls to complex printing on rare fabrics.

The unmatched beauty of Asian stenciled art spread to the Middle East and from there to Europe by means of the Crusades and related conquests. By the 1600s, artists were stenciling images on furniture, textiles, and the first wallpapers throughout Europe.

Stencils reached America in the early 1700s, when they were first used on bare floors to simulate carpets. By mid-century, more American homes saw rough-hewn timber walls being covered with plaster suitable for painted decoration, and stenciling’s influence grew accordingly.

This c. 1820 theorem painting has a full array of flowering plants and detailed butterflies, indicating the artist, who remains unknown, was exceptionally skilled.

PITH TO VELVET

Meanwhile, Europe’s increased trade with Asia in the 18th Century resulted in a demand for Chinese decorative items, especially in England. Factories ramped up to produce china dinnerware, porcelain gained popularity, new varnishes were concocted to resemble Asian lacquers, and people were entranced with paintings on something called “rice paper.”

“It is not really paper, but a material called ‘pith,’ which is taken from a tree in China that looks like a sycamore,” wrote Lefko in her landmark 1994 book, *The Art of Theo-*



This theorem painting displaying a profusion of flowers spilling from a fluted vase was painted in 1827 by M. D. Rouse in Shelbyville, Kentucky.

rem Painting: A History and Complete Instruction Manual. “The white pith, which is found beneath the bark of the tree, is pounded paper thin, giving it a soft, velvety appearance.

“Pith was not available to paint on, so velvet was substituted because of its similar texture and appearance,” she noted. “The early velvet was of a much finer weave and tighter than what is now produced.”

London artist J. W. Alston first discussed painting on velvet in 1805 in *Hints to Young Practitioners in the Study of Landscape Painting to Which are Added Instructions in the Art of Painting on Velvet*. Alston described mixing paints for working on velvet, but he did not mention stencils. Within a few years, however, American girls’ schools began using stencils to produce velvet paintings, inspired mainly by the popularity of colorfully stenciled walls. For the first time, the word

“theorem” became attached to this new style of painting.

Matthew D. Finn’s book, published in New York in 1830, bore the interminable title *Theoretical Systems of Painting, or Modern Plan, Fully Explained in Six Lessons and Illustrated with Eight Engravings by which a Child of Tender Years Can Be Taught This Sublime Art in One Week*.

In it, he stated: “Now, of all the methods ever introduced in the art of painting by water colours, that of the theoretical takes the lead; more particularly in flower painting, in which the beautiful tints, lights and shades, which can be so easily accomplished, even by a child, remain unrivalled; whilst the mystery of the performance lies hidden from the nicest critic.”

For the general population, his use of “theoretical” became “theorem” and synonymous with “stencil.”

STATUS SYMBOL

As Finn noted, even a child of tender years could learn theorem painting, which made it particularly appealing for the girls’ academies.

“Girls learned embroidery through the making of samplers, one of the most important art forms in early America,” wrote Miriam Forman-Brunell in her 2001 *Girlhood in America: An Encyclopedia of the girls’ schools*. “Many young women also learned to paint with stencils, a process known as theorem painting. By the early nineteenth century, both painting and embroidery had become signs of status and represented proper feminine accomplishments.”

Theorem painting had a key advantage over samplers. It took far less time and practice to turn out a finished product. Plus, it was easier to teach. Aside from the girls’ academies, itinerant artists soon traveled the land, teaching how to cut stencils and paint while also selling paints, velvet, and silk to eager housewives.

“The art-instruction books, itinerant artists, and girls’-academy teachers all approached painting primarily as a craft, not at all as an academic painter would,” according to Lefko. “Copying was considered an acceptable art form, for realism was the goal. The whole painting process was thought of in terms of separate parts put together, step by step, much as a house would be constructed. This is what gives the theorems on velvet their stylized and somewhat stilted look.”

By the 1820s, girls, women, and a few male artists were practicing theorem painting. Teachers were plentiful and found ready audiences to learn the craft. “With a few exceptions, very little is known about the individuals who practiced the art of theorem painting,” Lefko noted. “Not many of the surviving examples are signed and most of those artists remain unknown.”

A VERSATILE CRAFT

Many theorem paintings of the period—as well as today’s reproductions—favor as subjects fruit,

flowers, leaves and vines, accompanied sometimes by birds and butterflies. Landscapes, biblical scenes, and commemorative mourning pictures were less common and usually involved a combination of stenciling and freehand painting.

Paints were color pigments mixed with gum tragacanth and water to a creamy consistency, and brushes were the type itinerant artists used when stenciling walls or furniture. The stencils themselves were sheets of paper coated with linseed oil to promote transparency and then varnished to stiffen and seal the stencil.

While theorem painting today is most often associated with velvet, a number of other materials served as the background, including paper,

silk, linen, Bristol board, and lightweight wood.

"Theorem painting on velvet was a versatile craft; many other lovely items could be made in addition to pictures to hang on the parlor wall," Lefko stated. "Stenciled velvet made beautiful bell pulls, ball gowns, ribbons and belts, hand screens and fire screens, purses and bags, sewing cases and garters, to name only a few."

FRIGHTFUL SPECIMENS

Just as converging social, economic, and artistic trends encouraged the growth of theorem painting in the early 1800s, those same trends sent it into decline around 1840. As women gained more stature in society, girls' education graduated from social-

hostess skills to more academic studies, with theorem painting being dropped from the curriculum of many schools along with other decorative arts.

Even in places where the arts continued to be taught, a new art form caught the nation's fancy. "When theorem painting waned toward the middle of the century, it was largely replaced by 'tinsel painting,' a technique of reverse painting on glass characterized by the application of foil behind unpainted areas," according to Gerard Wertkin and Lee Kogan in their 2004 *Encyclopedia of American Folk Art*. "Tinsel painting was popular from the mid-1830s through about 1890, and the most common images were of floral wreaths and vases of flowers."

WHEN IS A "THEOREM" NOT A THEOREM?

Beware the word "theorem" when applied to items that technically don't qualify as theorem paintings, at least in the widely accepted historical sense of the word.

The origin of "theorem" to describe a specific type of painting usually is traced to Matthew D. Finn's 1830 instruction book, *Theorematical System of Painting, or Modern Plan, Fully Explained in Six Lessons and Illustrated with Eight Engravings by which a Child of Tender Years Can Be Taught This Sublime Art in One Week*.

In it, Finn labeled the stencils themselves as theorems. As a result, the then-popular style of painting with layered stenciling on paper or cloth—most often velvet—became recognized as "theorem painting," as it has for nearly two centuries.

But there is a tendency now among some antiques dealers and even a few museum curators—in other words, people who should know better—to label certain items "theorems" when these items do not technically qualify.

It is no surprise that this is a hot topic with one of the nation's foremost researchers into the history of theorem painting, Linda Carter Lefko, author of *The Art of Theorem Painting: A History and Complete Instruction Manual*. When we asked Lefko if she had encountered such items, she said, "This happens over and over," and listed some common examples.

"I'll see a basket of fruit stenciled on a tabletop with bronze powder stenciling, or a compote of flowers stenciled with bronze powder on the back of a period chair and it'll be labeled 'theorem stenciling' or 'theorem stenciled chair,'" she said. "But what they're referring to is the basket of fruit or the compote of flowers."

This is an error because traditional theorem painting frequently relied on easily stenciled subjects such as fruits and flowers that have become associated with true theorems.

"Theorem painting is the technique of layering several stencils," Lefko explained. "It's the process. It's not the subject matter.

"Antique stuffed velvet carrots and velvet strawberries are big now—I see them at high-end antiques shows—sometimes commanding several hundred dollars," she said. "Because these things are made of velvet, and people associate velvet with theorems, they call it a 'theorem

carrot' or 'theorem strawberry' even though there is no stenciled painting on them at all."

Another misnomer involves labeling freehand paintings on velvet as theorems.

"There are paintings on velvet or silk where you can tell—if you examine them—that no stenciling was involved," Lefko said. "And you can tell because there's no hard edge such as you'd find when stencils are used. Theorem means stenciled, and that means you're going to get a hard edge.

"You can see lovely little watercolors of a basket of fruit, let's say, and it's being called a theorem watercolor of fruit," she said. "But if no stencils were used, it's not a theorem regardless of how beautiful it is."



Careful examination shows pencil lines outlining the bird, butterfly, and roses on this early-1800s watercolor, which could easily be misconstrued as a theorem painting because it is painted on velvet and borrows common pictorial elements. However, no stencils were used in creating it.

COURTESY OF LINDA LEFKO



Overflowing baskets of fruit were a frequent topic for school girl theorem paintings such as this c. 1825 example by an unknown artist.

of Trapp, Pennsylvania, whose mid-20th-Century theorem paintings inspired by Pennsylvania German *fraktur*—one recently sold for \$25,000 at auction—helped rekindle enthusiasm for theorem painting.

Little evidence exists about a revival of interest in theorem painting during the Colonial Revival movement in the early 20th Century, when other forms of American folk art and needlework experienced renewed popularity. But during the 1970s, when an even larger surge of interest occurred in American traditional crafts, theorem painting again emerged as an attractive component of early period décor.

TO AGE OR NOT

Contemporary theorem painting is a microcosm of the American traditional crafts movement, reflecting different artistic philosophies found among artisans creating reproduction period furniture, metalwork, and folk art in its many forms. The four painters featured in this article

Another reason theorem painting became passé was linked to the very basis for its original popularity. The idea that it was so simple even a child could do it provoked this harsh assessment from Maria Turner in her 1833 book, *The Young Ladies' Assistant in Drawing and Painting*: “Every Miss, however deficient, imagined that she might become an artist, if she could pay the sum of three dollars to some teacher who pretended to teach velvet painting. Frightful specimens were daily multiplied, and the few who admired and had perfect knowledge of the art, soon were disgusted with it; and let it drop into oblivion; so that we now scarcely hear it mentioned, or see traces of it, except when we travel through the country where painting has not made great progress.”

Although interest in theorem painting ebbed in the 1840s, it never entirely left the American craft scene but was kept alive through the next

century by a few self-taught artists who remained enthralled with the form. One was Emma J. Cady of East Chatham, New York, who was creating beautifully wrought theorem paintings on paper during the 1890s. Another was David Ellinger

A self-taught artist, Nancy Rosier creates both traditional still life subjects and stenciled scenes like those done by some early theorem painters. She ages her work to blend with antiques in period homes.



clearly personify the situation.

Aging—whether to intentionally make a theorem painting look like a survivor of the 19th Century or something newly created—is the most significant divide among theorem artists today. It is the same conundrum facing, for example, reproducers of period-style furniture: Do you distress the chair or not? With theorem painting, it becomes a question of paint color and whether the velvet is dyed to appear two centuries old.

“Most of my theorems have a very traditional look and they perform well in an antique setting,” said Nancy Rosier of Williamsburg, Virginia. “I age them to tone down the original brightness and give them a mellower antique look.”

Likewise, Lefko—consistent with her fierce dedication to historical accuracy—creates each of her theorem paintings as a facsimile of early ones. She prefers to paint on vintage fabrics and paper, frames her work only in antique frames, and wants the painted colors to appear consistently aged with the rest of the piece. “I think most people want a painting to blend in with their antiques and other furnishings,” she said.

The other camp includes artists who favor the look of the theorem paintings when they were created. They do not age the velvet and use colors based whenever possible on historical research into the original bright hues.

“When I first started out, I did dye the velvet with tea. In my book, I even have a section on tea dyeing,” said artist and teacher Linda Brubaker of Lititz, Pennsylvania, author of *Theorem Painting: Tips, Tools, and Techniques for Learning the Craft*. “But once I really delved into it and started researching it in museums, I could see where the original colors had aged naturally. It was in the 1980s when I stopped dyeing the velvet.”

Sandra J. Coldren, also of Lititz,

originally meticulously aged her theorem paintings. “But then I found one of mine for sale in an antiques shop where the proprietor insisted it was produced in the 1800s,” she recalled. “I realized that if I wanted to continue aging my work, I must start putting the date on the front of the painting instead of on the backing where it could be torn off. When I started selling my work without antiquing, it became another form of distinction between mine and the work of others.”

CUTTING STENCILS

Cutting one’s own stencils—or at least learning how—instead of relying on mass-produced versions is important to all four artists, even those who teach theorem painting classes. Some prefer paper stencils like the early ones, while others go with see-through plastic, such as Mylar.

“I hand-cut all of my stencils,” Brubaker said. “And whenever I teach a class—particularly a beginners’ class—they need to cut their own stencils. One reason is because



Theorem paintings were often stenciled onto paper in the 19th Century, a practice Linda Lefko used to re-create these unusual miniatures of seashells. Lefko relies on period materials, in this case using paper from an early Newport, Rhode Island, ledger and antique gold-leaf frames.



Linda Brubaker painted this ring of flowers on velveteen using the bright colors of the originals. She is proficient in using both oil and watercolor paints.

Sandra Coldren mixes her own oil paints to achieve the bright colors of original theorem paintings, as on this overflowing basket of fruit. She does not age her work.



anyone who has ever cut a theorem stencil knows it takes a lot of practice. I also teach stencil cutting as a class because it's a craft that needs to be passed on so it's not forgotten."

Lefko also creates her own stencils, using Mylar. "It's an art to cut one well," she said of deciphering and cutting stencils based on period paintings. "Some of the designs are very intricate, crazy, wild things, while others are quite simple."

PAINT CHALLENGE

Although most 19th-Century artists used watercolors, most contemporary theorem painters rely on oil paints. Even Lefko, the most fervent purist of the group, considers oil paints an acceptable deviation from strict authenticity.

"The watercolors that we know today are not the same composition of the watercolors of 1820," she explained. "My professional life has been geared toward replicating the old stuff as appropriately as possible. If you can use the exact same materials, that's one thing, but with the watercolors, there's no way you can do

they become very familiar with the design they'll be executing. They'll also have a better understanding of how it's going to fit together. And there's a certain amount of satisfaction in doing the entire process, start to finish."

Her stencils are paper, which means you cannot see through them. "That way you have to rely on your instinct and your memory, just like the early artists did," she explained. "Now, would they have used Mylar if they'd had it back in the 19th Century? Probably."

Rosier recounts how she learned to cut her own Mylar stencils because none existed for the theorem paintings she first saw in museums. "I'm not doing just one theorem, and the stencils are very precious to me," she said. "I want them to last as long as possible. Of course if they would have had Mylar in the mid-1800s they probably would have used it as well because you can see right down through it. It's amazing to me how beautiful some of the antique theo-

rems are when you consider they couldn't see through their paper stencils, which made positioning much more difficult."

"I truly believe the invention of laser-cut theorem patterns has helped to keep the craft alive and to grow," Coldren said, although she almost exclusively uses stencils she cuts herself. "In the past your theorem was only as good as your cut stencil, and

True to her heritage, Sandra Coldren often employs Pennsylvania German elements from *fraktur*—such as these tulips and distleflinks—into her theorem paintings, produced on cotton velveteen.



it. I've tried everything with the current pigments we have—including gouache—but it's just not the same. I can get the look of the old ones by using oils, so that's what I do."

Armed with a grant from the Lancaster County branch of the Pennsylvania Guild of Craftsmen, Coldren has researched the 19th-Century paints and their colors, concluding the closest she can come is to mix her own concoction of pigment, linseed oil, and gum arabic. "In studying the colors that were actually used, I found that by experimenting and mixing my own, I could create a nice creamy paint that worked really well on the velveteen," she said. "I've created formulas to match some of the original colors and have a red and a blue that you can't get in the stores."

Rosier echoed the others. "I found that as I reproduced the antique theorems, I could best get the look of them by using oils," she said.

Still, two of these highly experienced painters are exploring the realm of watercolor theorem paintings, using paper instead of velvet. Brubaker has expanded into watercolors and achieved two top-ranked "A" awards for watercolor theorem painting from the prestigious Historical Society of Early American Decoration.

Coldren is in an experimental stage with theorem watercolors on paper. "I'm getting into what's called 'pith' painting," she said, harking back to the style that inspired the earliest theorem paintings on velvet. "Many of the early pith paintings done in the Orient in watercolor had flowers with some sort of bug—usually a cricket or grasshopper or butterfly—so that's what I'm working on."

These four artists have collectively amassed nearly every theorem painting award imaginable, from the rigorous testing of HSEAD to numerous state and local citations for the beauty of their paintings. Both

Brubaker and Rosier have produced theorem-painted decorations for the White House Christmas tree.

All four have been creating theorem paintings for decades and have researched historical examples and experimented with how to best replicate the vintage styles. They all have been listed several times in the *Early American Life* Directory of Traditional American Crafts.

LINDA BRUBAKER

Genetics might play a role in Linda Brubaker's proficiency in theorem painting. Her grandmother was a painter and her great-grandfather a well-known faux finisher in Lebanon, Pennsylvania, in the late 1800s. So when one of Brubaker's cousins first showed her a theorem painting thirty-two years ago, Brubaker was smitten: "It was just so beautiful."

She took a class, read books on the art, studied examples in museums, and quickly mastered the art. "I come by it naturally," she said. Proof is in the number of "A" awards she has received from HSEAD for theorems in oil, theorems in watercolor, country painted tin, and bronze-powder stenciling.

"My customers have told me my theorems have a sense of peace and tranquility, and that the colors sing," she said. "In other words, when you look at a peach I've painted, or a pear, or a rose, you want to pick it up."

Brubaker credits much of her work's appeal to the skillful blending she achieves by using what she calls "the velvet finger," wrapping velvet around her finger for daubing and smoothing the paint instead of using a brush.

Through the years she has taught



The subtle shading in this theorem painting shows the skill that has earned Linda Brubaker top marks from the Historical Society of Early American Decoration.



Linda Lefko stenciled this image onto antique silk to reproduce an early-19th-Century mourning picture, a popular art form of the era. All of her work replicates antiques.

numerous theorem painting classes for HSEAD, several museums, and other sponsors. Today she sells her work by special order, with prices anywhere from \$25 to \$1,000 and up.

SANDRA COLDREN

Although she has won several awards for her theorem paintings in traditional styles, Sandra Coldren is determined to explore new aspects of her craft. “I really do love the old designs—the fruit, flowers, and birds—but my heritage is Pennsylvania German, so you’ll find a lot of German motifs added to my designs.”

Coldren became interested in traditional American crafts while growing up in central Pennsylvania. “I was lucky enough to be able to study under several talented theorem

artists and historians. Like every traditional craft, theorem painting must be learned and then passed on, so today I’m fortunate to take what I’ve learned and teach it to others.”

She still has a day job, although she launched her business, Theorems by SJC, in 1983. “I continue to enjoy creating new designs, studying the old ones, and meeting the customers who buy my work,” she said.

She sells her theorem paintings at The Weathervane store at Landis Valley Museum in Lancaster and at leading fine art and crafts shows. Prices range from \$25 to about \$400.

LINDA LEFKO

Expertly replicating decorative arts of the early 19th Century has been a lifelong passion for Linda Carter

Lefko. A respected artist, historian, and author, she said theorem painting is simply one of a long line of traditional American crafts she has pursued over the years.

“It’s the whole period from about 1810 to 1850 that interests me. I was an art major in college and taught art. My mother was an antiques dealer, so I was exposed to really good stuff. I was aware of what theorems were, but when I decided I was going to concentrate on the historic end of things, I really started with graining. I became proficient and wrote articles and lectured on graining because it really captured my fancy. Theorem painting became an extension of that.”

Lefko, who lives in Penn Yan in the Finger Lakes region of New

York, studied vintage theorem paintings at museums, antiques shows, and through her membership in HSEAD, earning a reputation as one of the country's leading authorities on American theorem painting as well as creating them.

Her theorem paintings are distinguished by her dedication to authenticity. "I try to make my theorems look like the old ones. I use antique paper—rag paper from the 1830s—and I'll use old silk or old linen, and occasionally velvet."

Most of Lefko's theorem paintings are special orders, based on the buyer's preference of subject matter, background material, and framing. Prices generally range from about \$50 to \$500. Other than her commission work, Lefko's creations are available at the New Hampshire Antique Co-op in Milford and the Ontario Antique Mall in Canandaigua, New York.

NANCY ROSIER

Years of studying antique theorem paintings in museums have given Nancy Rosier a deep understanding of the art form, and her artistic gifts have enabled her to create beautiful examples of it for nearly three decades.

"I've always enjoyed a historical period look for my home, but years ago we didn't have antiques, so I made things myself—needlework and the like—with varying degrees of success. Folk art was very interesting to me because it was something where I could obtain a level of expertise without having an academic background in the arts.

"I consider myself a true folk artist and am completely self-taught," said Rosier, who was a

Nancy Rosier has taken her theorem painting in a new direction by reproducing *grisaille* renderings of traditional subjects. She uses gray oil paint on aged velveteen then frames each work in complimentary black. "One-color theorems are unusually rare and demand the painter to pay even closer attention to careful shading so the completed composition makes sense to the eye," she said, explaining her attraction to the technique.

school teacher for several years. "And I don't particularly encourage people to take lessons. I think it might discourage your individuality in executing a theorem, because there's really no right way or wrong way. It's folk art. Once you understand the basics of the process, I say do your own thing."

Rosier does both reproductions of antique theorems and some original designs. "I've done a lot of floral and fruit, some of the traditional ones and some of my own designs. My expansion on subject matter through the years has been with theorems that are scenes," including some of the traditional mourning art.

She has an intricate method of aging her paintings and pays close attention to shading, which she feels

is a critical aspect of theorem painting. "I paint with a piece of the cut velveteen over my index finger, dipping it into the oil paint and brushing it into the stencil," she explained. "When you evaluate a theorem, you're going to be looking at the shading of the color. Even if you're going to be using only one color in part of your design, you want to make sure you're applying that color in an interesting way, not just filling in a hole."

Rosier sells her theorem paintings in museum shops in Williamsburg and elsewhere, at major crafts shows, and via her web site. Prices range from about \$70 to \$500. *

Gregory LeFever is a contributing editor to *Early American Life*.

