



the paper docs

Many of us might feel a tad squeamish at the thought of prodding, laundering, or gluing a four-hundred-year-old map. Not these women.

by Margarite Nathe

When she opened the protective enclosure and saw the pink, life-sized breast molded entirely of foam rubber, Jan Paris gasped.

It was affixed to the cardboard wrapper around a copy of *Le Surréalisme en 1947*, the catalog for the 1947 surrealist exhibition in Paris. The wrapper (or chemise) is a rare accessory to the catalog, constructed by none other than Marcel Duchamp. We don't know exactly how many copies of the deluxe edition with Duchamp's chemise have survived in libraries around the world, Paris says, but only a few also have a second chemise and Duchamp's black slipcase (which Paris had just removed from the copy in her hand).

This piece of Duchamp's own handiwork is the stuff of art historians' dreams, and yet it had been tucked away in the art library for decades, getting shoved and shouldered by the books around it. It wasn't until 2004 that a library employee pulled it during a routine sweep for damaged items, and finally, its outer layers battered and scuffed, *Le Surréalisme en 1947* made its way to conservator Jan Paris, UNC's rare-book-surgeon.

Wilson Library harbors the university's special collections, over twenty-two million items in all. Among them are huge, vellum-bound tomes; tiny Civil War diaries; an uncorrected proof copy of *The Bell Jar*; hundreds of fifteenth-century incunabula,

printed just after the debut of moveable type; letters, pamphlets, manuscripts, and photos.

When tricky special cases such as *Le Surréalisme en 1947* turn up, Paris sometimes calls on her across-campus colleague, Lyn Koehnline, for a second opinion. As the conservator for UNC's Ackland Art Museum, Koehnline is responsible for the museum's fifteen thousand works of art, including ten thousand drawings, prints, photographs, and other artworks on paper.

For the past nineteen years, Paris and Koehnline have been watching their collections grow and giving each other help along the way. In their labs, they treat never-ending queues of papery patients afflicted with rips and tears, rashes of mold, water stains, acidic decay, and—the bane of paper conservators—Scotch tape. Some need simple, protective boxes, others complete dismemberment and then a nice, warm bath.

The chemistry of cling

The buxom catalog's future hung in the balance for almost a year while Paris researched its treatment options. Its outer cardboard chemise had been lashed with Scotch tape and masking tape, both of which contain adhesives that discolor and corrode paper as they age.

"One of the very worst problems in paper conservation is any kind of tape that sticks by itself," Paris says. It's such a problem, in fact, that she just attended a five-day workshop in Shepherdstown, West Virginia, all about removing tape from paper.

Tape is especially tough to remove from brittle papers, Paris says. As they get older, some papers get more acidic—especially those in mass-produced books made after 1840. That was when the book industry began using cheaper materials and more chemicals to keep up with the demands of a swelling literate population. And that's why you may pick up a book from 1790 with pages that are in great shape, when its 1890s shelf-mate is so brittle it crumbles between your fingers.

In any case, removing tape involves first looking at it to figure out if it's water-soluble (usually relatively easy to remove with water, as long as the tape doesn't also cover water-soluble ink or paint), or, the worst kind, pressure sensitive.

Paris and Koehnline first determine whether the adhesives are rubber- or acrylic-based, and what the top layer is made of—materials such as cellophane, paper, cellulose acetate, or other plastics. They also estimate how long it's clung to the paper, and how the adhesive changed over time.

Then there's the chemical makeup of whatever the tape is actually stuck to. "If I'm thinking about using an organic solvent," Paris says, "I have to do tiny little tests on the ink to be sure it's not soluble in that solvent. And even paper can react to solvents."

It was the dreaded pressure-sensitive tape that was used with such abandon on the chemise of *Le Surréalisme en 1947*. Even after Paris concocted a recipe of organic solvents to remove the adhesives, tracks of unsightly stains the color of apple cider remained. That's when Paris called up Koehnline, who's something of a stain-removal maven.

In working with museum showpieces, Koehnline generally tries to eradicate damage that's ugly, or even just visually disruptive. When she finishes with a work, anyone looking at it will ideally clap eyes on the art itself, not its damage or repairs. Paris, on the other hand, usually isn't as worried about making things pretty. "It's not about having a visual experience with most books," she says. It's about research value.

As an artistic artifact, though, *Le Surréalisme en 1947* was different. So after putting their heads together over the stains inside the chemise, Paris and Koehnline confirmed

Since 1988, Lyn Koehnline, left, and Jan Paris have kept UNC's paper treasures hale and hearty. Photo by Coke Whitworth.



Treating the papery infirm. *Top*, Lyn Koehnline slips a sixteenth-century print into a cleansing bath of deionized water with calcium hydroxide solution. *Middle*, Jan Paris pieces together a 1795 letter from a mother to her traveling daughter. *Bottom*, Wilson Library's copy of *Le Surréalisme en 1947*, complete with Duchamp's foam breast. Photos by Margarite Nathe.

that while the marks stuck out like a sore thumb, they weren't actually hurting the paper. The catalog's damaged outer chemise needed some reconstructive work, so—quite unusually—Paris just extended the repair tissue to cover up the stains, subtly sweeping them under the rug, so to speak.

Sshhh...

Deciphering the fine print

Paris's lab is full of long tables, tiny glue-pots, tweezers, miniature pillow-weights filled with beans, delicate Japanese tissues, and a gigantic book press that echoes medieval dungeon décor.

Koehnline's lab is similar, except without the book press; instead, she has a massive suction table, the surface of which gently inhales to flatten whatever sheets of paper or parchment are spread out on it. The suction not only helps to delicately dry fragile materials, it also makes it easier to remove stains by drawing the cleansing fluid through the precise spot where the blemish appears, rather than allowing the solvent to spread throughout the paper.

Like a friendly neighbor, Paris drops in occasionally to borrow the suction table's services for library materials, just as Koehnline does with particularly large prints to be washed in the four-by-six-foot sink in Paris's lab.

While Paris treats plenty of the library's celebrities, it's really the ephemeral underdogs of the collections that get her excited: pamphlets, advertisements, even 1950s copies of *Seventeen* magazine. She keeps these (most of which were never meant to reach old age) on life support because researchers can sometimes use them to read between the lines.

Take the 1770s cipher book, for instance, made and used by a young girl named Martha Ryan to study math. Martha, like many of her literate contemporaries, made her own ink out of mixtures of iron pyrites, oak galls, water, and gum arabic. Then she used sacking cloth as a cover.

Now, the cipher book is water-damaged, stained, and full of holes where ink laid too heavily has eaten through the pages. But it's also full of beautifully curving penmanship and elaborate drawings of ships (*The Schooner Freedom*, *The Ship American*). "As beautiful as it is, though," Paris says, "it's not primarily about aesthetics; it's a historical document that can be read in many different ways."

For example, researchers might glean from the contents details about eighteenth-century education of young women in North Carolina, or women's and girls' patriotism. The cover and paper quality, along with her drawings, can give us clues as to Martha's socioeconomic class.

For some artifacts, even mouse-nibbled corners, tears, and water stains can convey how and where an item was stored, how often its owner thumbed through it, and how carefully it was looked after over the decades.

Basically, Paris says, how and where certain items passed their long, sometimes traumatic lives can have as much to say to different researchers as the writing inside. "The cipher book doesn't have to look other than what it is," she says. "Its messed-up features are part of it now."

The art of conservation

In her own lab, you can find Koehnline anchoring microscopic flakes of errant paint, or using the suction table to rid prints of foxing (nasty little brown spots that sometimes crop up in high humidity—you've probably seen them on your own old books), or analyzing paper to date works of art.

But she also advises the Ackland curators on museum purchases. That includes keeping a sharp eye out for items that are too damaged, would require excessive repairs, or have been altered by over-zealous restorers (or outright frauds).

Art restorers of the past were sometimes tempted to fill in the blanks a little too well, Koehnline says, by replacing damaged and missing parts of works with their own careful mimicry.

Koehnline chooses two out of the hundreds of flat, identical boxes lining the walls in a storage room off her lab. She sifts through its contents, and eases out two matted sheets of paper. One is a fifteenth-century drawing of Saints Andrew, Peter, and Paul; it suffered a grisly tear at some point in its life that cut Saint Paul off at the ankles. Someone along the way had "restored" it by carefully replacing the lost paper, and drawing in a presumed continuation of the image—Saint Paul's feet.

"We would *never* do this now," Koehnline says. "Because a drawing is a unique work of art, and there's no way to be sure what the artist originally drew there." Instead, professional conservators make inconspicuous

repairs where possible, or leave damage as it is when they have no other choice.

The other sheet is a print of a sleeping cat in a garden. Koehnline points to a clump of grass in the corner; there was a hole there originally, she says, but based on a photograph of another museum's copy, she was able to fill the hole with a layer of paper and draw in the missing foliage.

Casual museum-goers would never notice the repair while the print perches in a frame on the wall. "But somewhere along the line, if another conservator simply looks at the back of the print, she will be able to see here what repairs I made," Koehnline says. "It's unethical to try to hide your repairs."

Koehnline's been researching a group of rare photographs in the Ackland, scenes of 1930s New York City taken by Berenice Abbott. These particular photos have the bonus of Abbott's handwritten notes penciled into their backing. Trouble is, the backing is made of acidic cardboard, which could slowly eat away at the photographs.

A surgeon once asked Koehnline, "Doesn't it make you nervous to work on things that are so valuable?"

So Koehnline faced a thorny problem: remove the backing to save the original photos, and lose the handwritten notes, or leave the backing intact and store the photos in a stable environment, hoping a better solution will present itself before it's too late.

After testing all the materials in the photos and months of research, Koehnline found out that Abbott's inscriptions are even rarer than the photographs themselves. She's given them special protective mats that, along with the museum's stable environment, will slow any deterioration caused by the backing.

Some things are damaged in ways that conservators just don't yet know how to fix. In these cases, Koehnline and Paris say, no treatment is the best treatment. But there's always hope. Their profession constantly

evolves, and conservators across the world investigate and publish their research results for all their colleagues to see.

Evolving standards

Unlike the conservators of fifty years ago, Paris and Koehnline document every repair and treatment they make, by writing out sometimes lengthy notes and including before-and-after photos. It's standard procedure in the field these days, they say, as is making repairs that are potentially reversible. And as paper conservators learn more about the chemical interactions of the materials used to make ink, paper, books, and art, Paris and Koehnline change the way they care for the things that come through their labs.

"It's all becoming much more complicated with twentieth-century materials," Paris says. "You know, paper is simple compared to plastic. We get book jackets that have plastic in them; museums get collages and other modern materials incorporating plastics."

Modern digital photography, Koehnline says, has opened up a whole new world of issues for museums. "Up until not so long ago, photographs were made from a limited range of materials," Koehnline says. And peering through a microscope often showed conservators all they needed to know about the anatomy and physiology of a photograph, which in turn determined its proper care. But that's no longer true.

As recently as ten years ago, most digital prints were produced with dyes rather than ink pigment. "They were very vulnerable to fading and moisture, which makes the ink move and blur," Koehnline says. "And that's still true of some photographs." Today's art photographers can make digital prints that are stable and long-lasting, she says, as long as they make careful choices about the papers and inks they use.

"So when a contemporary digital print comes into the collection," Koehnline says, "we can only hope to document how it was made before the artist has lost track of that information."

A little breathing room

After attending to *Le Surréalisme en 1947*'s tape situation, Paris was relieved to see that the volume's most conspicuous feature didn't need any reconstructive surgery. The catalog's several layers of outer cardboard had evidently protected it from too much oxygen exposure, which speeds up deterioration of latex (a main component of the foam breast). The decades of benign neglect had actually left Duchamp's contribution to the catalog in better condition than many of the other surviving copies.

Paris chewed over the idea of storing the catalog in an oxygen-free plastic cocoon, accompanied by oxygen scavengers. "But there is still some debate in the field about the pros and cons of long-term anoxic storage," she says. It would also make access to the high-profile piece rather cumbersome, and so she decided against it.

Today, *Le Surréalisme en 1947* is in the pink, and quite cozy. It lies cradled in a box inside another box inside *another* box—the third box being the special collections vault, a refuge that's constantly between 68 and 72 degrees Fahrenheit, with relative humidity between 45 and 55 percent.

Every single sheet that's wheeled into their labs calls for a whole series of decisions, Koehnline and Paris say. Treatments are on a case-by-case basis, and the choices conservators make—maybe most importantly, that of *what* to treat—determine what the next century's scholars will be poring over. So needless to say, Paris and Koehnline pay attention to the details.

"It might seem like conservators only see problems," Koehnline says. "But I think it's actually a very optimistic profession. We believe there will be people around in two hundred years who care if this art survives." ■

Lyn Koehnline and Jan Paris are both Fellows of the American Institute for Conservation. Koehnline is adjunct faculty in the Department of Art. Paris is an associate editor for books and papers at the Journal of the American Institute of Conservation.

You can sponsor treatment for an artwork at the Ackland (see Endview, page 49).