Unframing Art

Discovering a Frame's Hidden Past

By Susan Duhl

Frames were once only considered an aesthetic enhancement or means of display, but substandard and aged framing materials can adversely affect the appearance, structural security, and often the financial value of the framed object. An owner or art collector may only see the aesthetic value of the framed art or artifact, but framers also see the construction of the frame package and damages that might occur inside.

Unframing can reveal layers of fascinating history as the components of the frame's contents are exposed. Each part of a frame's construction can contribute information about previous framing, exhibition, and chain of ownership, age, and physical conditions. Awareness of certain physical properties will help predict potential problems and alert a need for careful handling. These details are crucial when dismantling old, artist-made, historically important, or financially valuable frames.

The poor framing materials and techniques used with this example created an unhealthy microclimate: the photograph was in direct contact with glass, hanging in direct sunlight in front of a window, and insecure hardware shows accelerated damages.

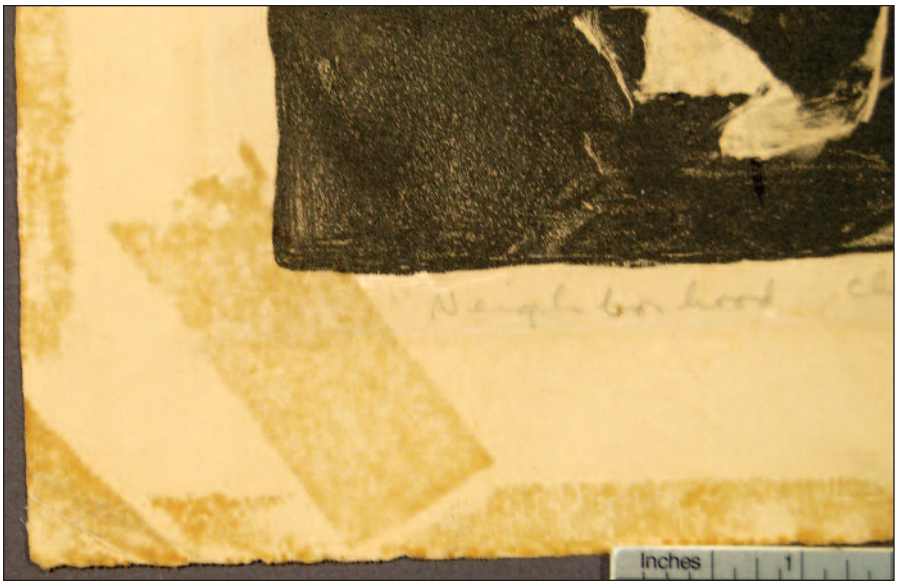
Unframing old artwork reveals a frame's construction as well as issues that may require careful handling

A natural process of disintegration occurs in all organic materials, including the display object as well as every material used in framing: wood, paper, fabrics, boards, adhesives, and glazing. While unframing, irreparable damage to the object can occur as a result of desiccated glues, weak corner joints, brittle boards, poorly applied or insecure attachments, weak glass, and deteriorated, damaged, or previously restored art and artifacts. The rate of deterioration, and the type and extent of resulting damages to frame contents, can be compounded by several factors:

- The type, quality, and interaction of an artist's construction materials.
- Substandard materials like poor-quality boards, hinges, tapes, adhesives, glazing, or hardware.
- Interaction of materials in the frame package will affect one another. For example, "mat burn" occurs when acidic and discolored byproducts migrate from acidic matboard into higher-quality art papers. Poorly applied hinges can cause distortion and staining. Rusty internal hardware will deteriorate and stain paper, textiles, parchment skins, and other materials.
- Exposure to extremes or acute fluctuations in environmental conditions will increase the rate of deterioration.

Paper, textiles, animal skins (parchment), feathers, and ethnographic art are considered among the most sensitive collection materials. These organic materials are particularly sus-

Direct contact with an acidic backing board resulted in deterioration and loss to this textile sampler.



Tapes and adhesives discolor over time, becoming more difficult to remove and often causing permanent damage.

ceptible to damage when framed with inadequate supports or substandard materials. Acidic and brittle boards, coupled with bad attachment techniques, can result in split textiles; brittle, distorted, and discolored papers; and board supports that can tear or break when handling. Some condition problems require immediate attention. For example, wet, moldy, or fire-damaged material, or those with actively flaking media, is best addressed immediately.

A subtle indicator of quality framing may be seen when ultraviolet glazing or rag matboards are used. In contrast, glazing in direct contact with the surface of an artwork may indicate a potential for additional poor workmanship and materials. More obvious indicators of deteriorated or damaged objects can be seen when textiles or documents are sandwiched between sheets of glass, thus trapping moisture and constricting the natural movement of organic materials, and resulting in permanent physical damages. Frames without dust covers can attract insects that digest protein and cellulose-based papers, boards, textiles, and glues. Metal fasteners can damage art if they are inserted through the artwork's perimeters or inserted so deeply that removal risks glass breakage. Well-intentioned but poor-quality hinges, mounts, and uninformed repair techniques can damage and sometimes destroy valuable objects.

The majority of reframing jobs in commercial shops involve unframing art from the 1960s and 1970s, when a number of notable advances were made in the manufacturing of framing materials. The enormous variety of newly available boards, tapes, and adhesives provided alternatives in constructing frame systems. Unfortunately, many products were marketed without concern for their longevity or interaction with art and frame materials. Also, framers often chose supplies for convenience and cost rather than preservation. Poor-quality materials and framing methods inevitably cause deterioration and irreversible damage to the art.

Developing an educated sensitivity is important in determining what repairs can be done in-house or when a conservator is needed to assess and repair the artwork. Identifying pre-existing damages in art and artifacts can protect both the object and the framer. It may be helpful to document visible damages on arrival to the shop or studio by noting the object and frame's conditions on the client's receipt. Digital photographs can also be a valuable record of the condition of the artwork. By acting only with the informed consent of the owner or authorized agent, framers can protect themselves and the artwork when pre-existing issues are revealed.

Gallery and framer labels, annotations, antique glass, mounts, or other attachments provide evidence of the content's age, frame replacements, and exhibition history. Multiple labels may indicate that items have been reframed more than once, and are therefore more likely to have multiple condition problems. Labels are irreplaceable records that can enhance the value of an object by maintaining provenance and chain of custody. Labels can be reattached to the back of the new frame, with or without protective polyester film encapsulations, or returned

detached for the client's records. Strainers, stretchers, and mounts with historic, artistic, or informative content should always be returned with the finished work, and can sometimes be creatively incorporated into replacement frames.

Matboards are a good predictor of the age and condition of the frame contents. A familiar discovery upon opening older frames is boards that are poor-quality, discolored, and brittle. Boards manufactured before the 1970s, including those described as "archival," were most often acid pulped fibers with high residual lignin content and no alkaline reserve. Wood pulp, chemical treatments such as bleaching, and other additives like sizing and fillers adversely affect physical and chemical stability inside a frame's microclimate. It wasn't until the 1980s that the term "archival" was specified for lignin-free, sulfur-free, alkaline-pulped materials.

Significant advances in adhesive formulas also occurred in the 1960s and 1970s. The industry introduced self-adhesive tapes, like cellophane and masking tapes, as well as new application methods, like sprayable and heat-activated delivery systems. Hinges, mends, and mounts can include paper, film, fabric, and filament-reinforced carriers coated with adhesives, including: starch and cellulose polymers (wheat, rice, methyl cellulose); protein-based (animal hide, fish, gelatin); rubber and acrylic polymer-based pressure sensitive (ATG, cellophane, masking, rubber cement, duct tape, drafting tape, some commercial hinging tapes, etc.); heat-activated (hot melt glue gun, dry mount, some mending tissues, etc.); polyvinyl acetate white glue (PVA); and a variety of others, like epoxies, cellulose nitrate and acetate, and glue sticks.

The introduction of "museum" or "conservation" quality matboards, acrylic glazing, and ultraviolet filtering materials in the 1970s and 1980s significantly contributed to the preservation of framed materials. High-quality rag and alpha-cellulose boards have very slow rates of deterioration and will not introduce acids into the frame package. Alkaline reserves in matboards help neutralize acids that occur as an object naturally deteriorates.

In the 1990s, zeolite micro-chamber technology provided another significant improvement in matboards. Zeolite is a natural mineral that acts as a molecular "trap," or sponge, absorbing internal frame pollutants and airborn pollutant gases from external sources like automobile exhaust, smoke stack emissions, curing paints and varnishes, and cleaning solutions. These are "archival" qualities

Acidic boards used with this photo caused it to deteriorate and become brittle, putting the entire photo at risk.

that provide physical and chemical protection and create a healthy framing microclimate.

Adhesives should be selected for their long-term stability and aging characteristics. Adhesives may be available in several grades and the highest purity grades are most suitable for preservation framing. Starch-based adhesives are the most commonly used alternative in paper conservation. Starch-based wheat and rice pastes and methylcellulose gums are chosen because they are non-yellowing, flexible, and reversible. There are many high-quality commercial starch, protein, and polymer adhesive preparations, although some should be used with caution because formulas may contain fungicides or preservatives, which can harm paper and textiles. Some product formulas change without notice.

It is important to respect the varying skills of framers and conservators, understanding the specialty services and collaborative potential in producing successful outcomes. Detached dust covers and loose backing boards can easily be cut away and discarded, provided there is no information or decoration necessitating retention. However, trying to remove adhered mends, supports, or aged tapes and glues, can present significant challenges and hazards.

Deteriorated mounts, adhesives, and tape attachments are often the most problematic and expensive condition issues for paper and textile conservators to address. Safe removal of attachments, without damaging the art, requires proper identification of numerous types of adhesives and tapes, and understanding all the variables in mechanical, water, and solvent-based removal techniques. Considerations include, but are not limited to: sensitivity of the media, paper, or textiles or other material to differ-

Poor attachment of this portrait constricted the paper, causing it to become distorted.

ent solvents; the result of mechanical action in removing the attachment; the potential for discoloration; lightening or liquid staining, or embedded adhesives; and the toxicity of solvents used on the artwork and by the technician.

Conservators in both museums and private practices are guided by The American Institute for Conservation's Code of Ethics and Guidelines for Practice. These documents describe principles of working on art and artifacts that are useful for anyone who handles art. Fundamental guidelines include maintaining the original intentions of the artist and using the highest-quality materials and the least invasive treatment options. An important principle to consider when choosing framing materials is the future "reversibility," or removability, of any added framing materials. Reversibility is defined as the safety and ease of removing hinges, mounts, and other attachments, contributing to the safety, beauty, and long-term preservation of the item.

It can be argued that this attention to detail is not often necessary, but it is another level of service to offer clients. The care of art can enhance a business at very little additional direct expense. Sensitivity to preservation guidelines will protect the art or artifact from a future need for conservation treatment. Proper care, repair, and framing of family heirlooms, artifacts, and works of art will ensure that they maintain their aesthetic and financial value and are preserved for future generations. **PFM**

Susan Duhl is an Art Conservator and Collections Management Consultant, providing assessments, consultations, and conservation treatment for private individuals, frame shops, museums, and libraries throughout the United States. Susan actively teaches, presenting lectures and workshops on care and preservation of art and archival collections. As a Conservation Consultant to Nielsen Bainbridge, she conducts seminars at industry trade shows and distributor open houses, and serves as a valuable resource for product and market development. Susan is a founding member of the Art Conservator Alliance, formed in 1991.