

Cellulose Supports, Part II

by Hugh Phibbs

Modern papers are made of much more than just cellulose and sizing. They may include additives which can affect the receptivity of the paper to the media used on it.

Many glossy papers are loaded with kaolin or clay fillers which can make the paper highly reactive to moisture. These fillers seem to enhance the longevity of the paper (old magazines with coated pages). Printing inks adhere well to such coated papers and should not present a problem, although water-based media will usually cockle this paper when they are applied and may flake off if the paper is flattened. Pressure-activated media will not adhere well to the smooth surface of such paper and if framed may be affected by static from the glazing and by gravity or jarring.

Framers and conservators often focus on the hazards which static from the glazing can present to an unfixed pastel while ignoring another problem: any pastel which is shipped is in peril of a permanent blurring of the image if particles that form the design come loose from one part and resettle in another. Any pastel which is shipped is in peril; shipping it upright heightens this possibility, and shipping it flat,

design side up, can only be done safely if the work has been glazed with a strong laminated glass. Removal of tape from glass will impart a static charge, and is not recommended.

Many clay coated papers are thin, and may not be good candidates for mounting with edge supports. A mental experiment can be used to determine if a support paper is suitable to be mounted with edge strips instead of hinges. Imagine paper formed into a cylinder and secured in that shape. The paper is suitable for support from its edges if the cylinder would stand on edge for some time without deformation. Thin papers can also present a problem if they have been worked on with thick paint such as encaustic or acrylic, since the paint layer may weigh more than the paper itself. Such papers are best hinged with starch paste on Japanese tissue hinges that have been hand-dried with desiccated blotters to minimize the risk of cockling. This same problem is also encountered with heavily calendared modern papers.

A calendar roller may be used during the paper-making process to burnish the surface of the paper. This, in addition to the effects of the drying components of the machine and the speed at which the paper is produced, impart a high reactivity of such papers. They can cockle if exposed to minimal moisture and can be dented by casual handling.

Tracing papers are an example of



such reactivity. They are not commonly used in print-making since they will not stand up to the physical rigors of the printing press. But, artists may favor them for drawing. Graphite, the medium for which they were designed, will cling to their surface well, but looser friable media will not. Chalk or pastel used on a tracing paper should be considered quite vulnerable to static, gravity, or impact. Another problem is that hinges will show through the paper. Passing the hinges through the back mat will lessen this problem, but overmatting is preferable so that the edges of the paper can be restrained and supported by the window. Often the insistence of the owner that the entire sheet be shown necessitates floating along with the unavoidable aesthetic and physical problems that this entails. Using water-activated media on a smooth tracing paper will produce such severe cockling that the design will be affected and artists are likely to avoid this combination.

Papers made by artists are usually entirely different from filled or smooth machine-made papers. Artists, especially those new to paper making, are likely to create sheets which are fiber rich and lacking in sizings and coatings. These blotter-like sheets may themselves be the subject of the work and may not receive any medium. They will be difficult to frame since they will usually require floating and therefore hinging. Their unconsolidated surfaces and relatively high weight mean that ordinary hinges are likely to peel off the back of the art. If a pad of Japanese tissue is pasted and properly dried on the back of the sheet at the spot chosen for the hinge, a stronger hinge can be secured there. Water-based media and oil-based inks and paints would be absorbed into paper of this sort, so problems of flaking should be rare. Acrylic paint can serve as a binder and may help hold the fibers together, but pressure-activated media may produce mixed results when used with artist-made paper. The openness of the fibers will allow some of the particles to penetrate the paper's surface, but the pressure imparted by the drawing implement may disturb the surface of the sheet and loosen parts of it. Such papers should be regarded as dangerous to flex, especially as

their thickness increases.

Increased popularity of papers made around the world may mean that framers will be seeing bamboo paper from Nepal, unsized watercolor paper from India, or soft cotton papers from China. Many of these papers may be quite stable in a frame but may present problems during the matting process. Bamboo paper is physically similar to Japanese tissue and each can be expected to hold printing ink or water-based paints or inks well, but neither will provide a secure setting for pressure-activated media. Very friable media such as pastel may fall away from the surface of these papers even without static attracting it or an impact dislodging it. Owners of pastels on such papers should be warned to expect this problem. The Indian and Chinese papers will have the kinds of problems characteristic of unsized artist-made paper.

Another form of thick paper-based support which some artists may favor is one which is quite well-known to framers: conservation quality four-ply board. In many ways good quality matboard represents a stable and robust surface for water and wax-based media. Its texture should be receptive enough to accommodate graphite and colored pencil, but may be too smooth for chalks and pastels. The greatest problems which this board presents are those of lightfastness and weight. Artists who choose to work on four-ply board should be introduced to those which are pigmented for lightfastness and should be urged to leave the margins of the board bare so that it can be overmatted and supported by its edges. If a work on this type of board must be floated, it can be supported with laminated hinges which have two attachment surfaces and are passed through the back mat. These hinges were described in the Preservation Supplement on hinging, [PFM](#), February 1994.

Many varieties of matboard have a component not found in most papers— plastic. The polyvinyl acetate which is used to laminate such boards introduces the next class of support materials to be considered—synthetic polymers. When they are inside a piece of four-ply board, these polymers should not affect the medium. When they are formed into a sheet, they will present problems which we will investigate next month. ■