

Historic Furniture: Care and Preservation

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Proper care of furniture begins with understanding and appreciation of the unique characteristics of each piece of furniture within its surrounding environment. This article outlines some of the most critical environmental issues which affect the preservation of furniture.

The maintenance of proper environmental conditions plays a primary role in the preservation or deterioration of furniture. Wood, a complex organic substance, is the material from which the majority of furniture is constructed. Wood is responsive to changes in **temperature and relative humidity**. These two factors are intimately related and the proper control of them will go a long way in creating a stable environment for wooden objects.

It is not uncommon to find a very low level of relative humidity such as 20% or less during the winter season in many interiors, and then humidity rising up to 60% or more in the summer. This extreme cycle of fluctuations can cause damage to furniture such as splits, loosening of joints, detachment of veneers, and warpage. The damage can also affect the finish as well. Gilded, painted or transparent finishes can develop crazing, cracking, or cleavage.

To prevent these problems from developing, temperature and humidity need to be monitored and controlled. Inexpensive temperature and humidity gauges can be purchased at neighborhood electronics stores. Recording thermohydrographs are the best choice for museums and serious private collectors, due to their convenience and ability to record a week's worth of information at a time, which makes fluctuations easily identifiable. A practical maintenance goal for many areas of this country is to keep temperatures at 60-70 degrees F. with a relative humidity level at 45-55%. Furniture will often undergo severe stress when moved to markedly different conditions of temperature and relative humidity, and damage may result.

Minor humidity and temperature fluctuations are always preferable to extreme fluctuations. Air conditioners and dehumidifiers can be used to remove moisture from the air in the summer, and humidifiers combined with lowering room temperatures can be used to raise humidity levels in the winter. It is important to keep furniture away from direct sources of heat.

Light and UV radiation can have a negative impact on furniture as well. This often deteriorates the finish layer and can also affect the topmost 1-2 millimeters of wood. Evidence of finish damage includes the loss of gloss and increased opacity.

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Damage to the wood is revealed by a lightened appearance, resulting from destruction of natural colorants, giving a “bleached” effect. Reducing light intensity levels will minimize this damage. This may be accomplished by drawing curtains, shutters or shades, moving furniture out of bright rooms, installing light intensity reducing films over windows, and placing UV absorbing sleeves on fluorescent bulbs. Covering furniture in storage or in unused rooms with a soft cloth, such as unbleached muslin, will reduce damage from light as well as from dust and dirt.

Dust and dirt are complex materials which can obscure the surface finish of furniture, and may often contain chemicals which can corrode or etch finishes and metals. A regular surface cleaning schedule is critically important. Care must be taken when removing loose dust from furniture because it can act as an abrasive. Surfaces in good condition should be cleaned with a soft, dry cloth; cleaning of all other surfaces requires consultation with a furniture conservator.

Biological predation of wooden furniture can come from fungi as well as insects. **Fungi, molds and mildews** typically thrive in moist, warm environments where there is little air movement. An example would be a storage room where there is relative high humidity, such as moisture entering through floors or walls below ground level. This is another important reason for monitoring the relative humidity level of exhibition and storage areas. Correcting the humidity level is a critical first step in addressing fungal and mildew damage. Furniture can be completely destroyed by **insect infestation**. Powder post and furniture beetle infestation is especially common in European furniture. Detection of active infestation is accomplished by observing for new flight holes and frass, the dust-like byproduct of insect activity. If infestation is suspected, the furniture should be fumigated.

The variety and complexity of materials and techniques used in historic furniture manufacture suggest that specific recommendations regarding an individual object’s care be obtained by consulting a furniture conservator. A current listing of furniture conservators in your area is maintained by The American Institute for Conservation, 1717 K Street, N. W. Suite 301, Washington, D.C., 20006, (206) 452-9328, <http://aic.stanford.edu/> or contact this author at the address below.

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