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Scientific Approach in Conservation and Restoration of Leather and Parchment Objects in Archives and Libraries

Abstract

In order to ensure the best possible methods for preserving our cultural leather and parchment heritage in archives and libraries, a scientific approach that includes systematic assessment, evaluation and diagnosis in the professional praxis of conservation-restoration is necessary. The present paper is a review of our research towards the development of simple micro and non-destructive analysis and diagnosis for use in the practical conservation of vegetable tanned bookbinding leathers and parchment manuscripts. A review of the chemical deterioration of the materials and its characteristic appearance as well as examples of how simple analytical and diagnostic methods can reveal the effects of moisture, humidity and humid treatment on vegetable tanned leather and parchment, respectively, are given. The most severe effect is dissolution and gelatinization of the fibre structure from exposure to moisture and water at elevated or room temperature. Observations made by the naked eye, by means of the simple methods of measuring shrinkage activity and by characterisation of the fibre in dry and wet conditions at room temperature can be categorised into measurements of the state of deterioration. These observations have revealed that the effect of humidity and humid treatment on leather and parchment is so strong that the methods and conditions of conservation, restoration, storage and exhibition of these materials have to be questioned. Additionally, it is recommended that diagnosis and evaluation of the condition of leathers and parchments always be made prior to these actions. It is our hope that we hereby may urge more of our colleagues in the professional praxis to take part in establishing a culture of research, development and diagnosis as a basis for their active and preventive conservation and restoration activities.

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