Table 21.1. Mehra’s eight requirements for lining canvas paintings.

|  |  |
| --- | --- |
|  | Whatever the nature of the materials used, they should remain fully reversible with regard to additional relining eventually needed in the future; |
|  | Relining\* may not in anyway cause alterations in the structural character of a painting; |
|  | The materials used should have passed the selection in direct reference to the specific problems of the painting involved; |
|  | Flexibility must be guaranteed for an unlimited period of time; |
|  | The use of heat should be avoided altogether or must be considerably minimized; |
|  | Increase of weight as a result of relining should be minimal; |
|  | The adhesive selected should not be allowed to permeate the canvas, ground and paintfilm alike. Instead, it should form only a film between old and new canvases; |
|  | It must be optional to use the selected adhesive in different degrees of cohesive strength and it is imperative that it will have proper resistance to fluctuations in temperature and humidity. It should be compatible with the other materials used for the relining which it serves. |

*Source:* {{Mehra 1972}} (verbatim).

\**Relining* means lining; see {{Andersen 2012}}.

Table 21.2. Eight lining risk factors and example ratings.

|  |
| --- |
| **Change in paint properties or structure—due to solvent exposure (including water) or temperature change** |
| * 1. No risk or very low risk. |
| * 1. Small risk of subtle change. |
| * 1. Medium risk of flattening or stiffening the paint due to the use of solvents or temperature. |
| * 1. High risk of visible flattening areas with impasto and changing paint properties permanently. |
| * 1. Very high risk of flat impasto or paint loss and permanent change of properties. |
| **Change in canvas properties or structure—due to impregnation of adhesive or moisture/water exposure** |
| 1. No change or slight effect of adhesives bonding to surface. |
| 1. Slight change due to adhesives penetrating the surface. |
| 1. Decrease in strength or changed response to RH due to impregnation. |
| 1. Significant brittleness or weakness and/or change response to RH due to the effect of the adhesive, or risk of shrinkage. |
| 1. Serious chemical and/or physical weakening and deformation of canvas due to impregnation with adhesive, or high risk of shrinkage. |
| **Unstable environment (long exposure)—creep due to lack of support** |
| 1. No change with change in RH or temperature. |
| 1. Risk of increased cracks over 50 years. |
| 1. Risk of increased cracks and cupping over 10 years. |
| 1. Risk of bulging, cupping, and delamination over 5 years. |
| 1. Risk of delamination after 1 year of climate exposure. |
| **Short exposure to forces—lack of support with fast climate events, keying out or restretching** |
| 1. Support is as stiff as the paint layer—fully supported. |
| 1. Support is stiff, but not as stiff as the stiffer paint layers. |
| 1. Lining provides some support, but not enough to prevent damage with significant use of force (e.g., keying out in corners). |
| 1. Lining provides very little support, and there is risk of cracks and cupping. |
| 1. Treatment provides no support, so any slight or significant increase in forces will affect the paint layer directly. |
| **Shear forces between canvas and lining—due to stiffness in lining and shrinkage forces in canvas** |
| 1. No forces. |
| 1. Slight forces with changes in RH. |
| 1. Some shear forces with change in RH in case of canvas contraction. |
| 1. Local delamination of lining with change in RH if canvas contracts and the binder is not strong. |
| 1. High forces with delamination of lining if canvas contracts and the binder is not strong. |
| **Shear forces between canvas and paint—due to free movement of the canvas and stiffness in paint** |
| 1. No forces. |
| 1. Slight forces with changes in RH. |
| 1. Some forces and risk of long-term development of cracks in paint layer due to compression or tension. |
| 1. High forces and risk of cupping and delamination. |
| 1. Very high forces and risk of tenting and delamination of paint in high RH situations. |
| **Visual change—due to impregnation and subsequent change of refraction index** |
| 1. No change. |
| 1. ΔE < 1: Change cannot be seen with naked eye. |
| 1. ΔE = 1: Change is just noticeable. |
| 1. ΔE > 1: Change is obvious but the artwork can still be enjoyed. |
| 1. Significant change and seriously compromised appreciation of the artwork. |
| **Reversibility—due to materials used or construction of structural treatment** |
| 1. Easy to remove both canvas and adhesive (if present). |
| 1. Can be removed with little effort. |
| 1. Canvas is easy to remove while adhesive is more difficult, but low risk for original materials if care is taken. |
| 1. Canvas and adhesive can be removed only with some risk of damaging original materials. |
| 1. Canvas and adhesive cannot be removed without causing significant damage to the original painting. |