The Museum of Modern Art

11 West 53 Street, New York, N. Y. 10019 Tel. 956-6100 Cable: Modernart

Facil	ity/St	aff Report:	
	1		(name of institution)
			(address)
	(1)	K.	(telephone number)
Museu	m/Gall	ery Facilitie	es
		C/X	
Yes	No		
		Is your buil	ding (or facility within a building) fireproof?
	_		porary exhibition galleries and any other areas in which unpack/store temporary exhibitions temperature controlled?
-	-	Is temperatu in your faci	are maintained at 70-72° whenever temporary exhibitions are lities?
	_		ity level in your temporary exhibition galleries and other packing/storage areas controlled?
		Is humidity facilities?	kept at 50% whenever temporary exhibitions are in your
		Does your fa	cility have a Central Station Burgular Alarm System?
-			ide openings (doors, windows, etc.) protected? Manufacturer's name
		Do you have Manufacturer	an inside motion or sound detection system? 's name
	Successional	Is your Burg Department?	lar Alarm System connected directly to your local Police
		Does your fa	cility have a Central Fire Alarm System?
		Is your Fire	Alarm System connected to your local Fire Department?
			porary exhibition areas locked and secure during closed re periodic security checks made during such hours?
		And the control of th	de the details indicated below on your temporary galleries: mber of gallery length width ceiling height x x
			x x
			leries used exclusively for exhibition purposes and not les, lounges, etc.?

Yes	No				
_		Can you construct temporary floor-to-ceiling partitions?			
	-	Or can you utilize only a modular floor-to-ceiling panel system?			
_	<u>}</u>	Are your galleries lighted by fluorescent fixtures or are they exposed to sunlight (either through windows or skylights)?			
7	-	If so, have special devices/materials been affixed/applied to these light sources in order to filter out harmful ultraviolet rays?			
	B,	Are your light fixtures adjustable so that footcandles can be reduced to the required level (10-15 footcandles) for works on paper?			
		Do you have or can you fabricate locked plexiglas/glass and wood/metal cases to accommodate fragile works of art?			
Manhamat Time		Can you affix small framed objects directly to your gallery walls by means of security plates in order to deter theft?			
Staff	taff assigned to Museum/Gallery				
		Number of staff assigned to your Museum/Gallery: Professional (Curatorial & Administrative) Other (clerical, guards, preparators etc.)			
_		Are exhibitions always unpacked/repacked under the supervision of an experienced registrar or curator?			
—		Are experienced and fully trained preparators/other staff always available for the unpacking/repacking, handling and installation of works of art?			
		Is a professional security guard assigned to each temporary exhibition gallery?			
_	_	Can additional professional guards be assigned to galleries which are either too large to be surveyed by one guard or which have been divided by temporary partitions so that one guard is inadequate?			
		Do your guards have 'walkie-talkies' or other means of communicating with a security supervisor or central security office?			
		Title of staff member responsible for the planning and supervision of exhibition installations			
Other		· C2			
		Does your museum/gallery have a permanent collection?			
Management of the Control of the Con	Magalifications	Is it normally on view in other galleries within your facility?			
		Do you generally plan educational programs in conjunction with temporary exhibitions?			
		(signature/title) (date completed)			

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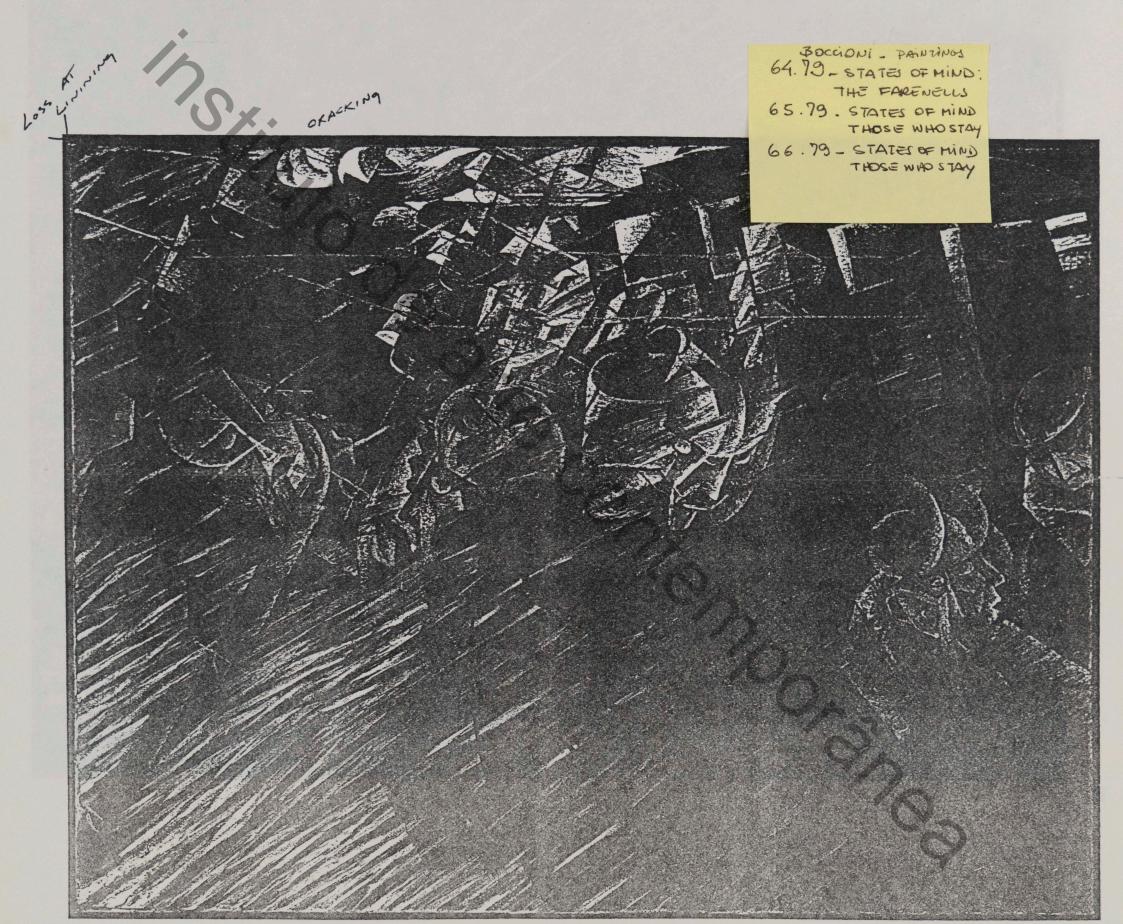


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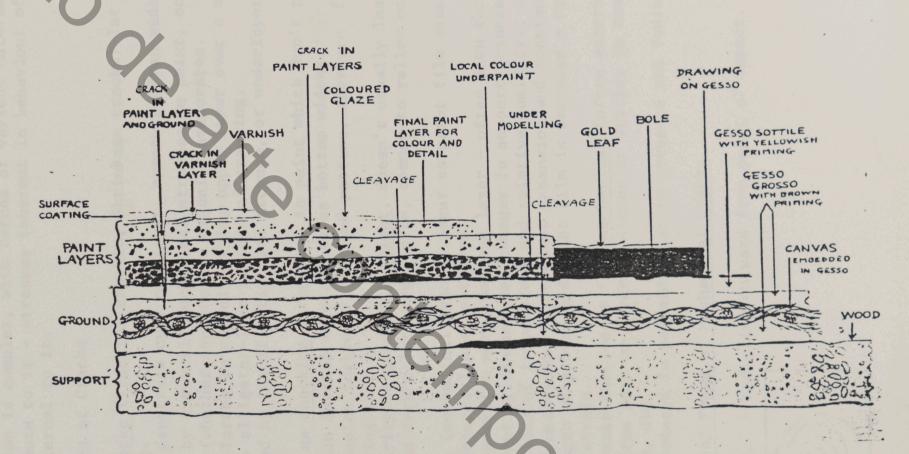
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Schematic representation of the stratified structure of a panel painting (vertical section)

Laminar Disruptions in Paint Film

I. Bond Failures <u>Parallel</u> to picture plane = <u>Cleavage</u>
May be hidden (Blind)

(or)
visible - as a blister

semi globular bulge

buckle tente

Interlayer, intralayer, sublaminal

Crack formation is complex, with forces of various natures simultaneously acting to contribute to it - stresses inherent in behaviour of paint and mechanical forces external to it.

II. Two Categories of Cracks

A. Drying cracks (Traction crackle, Shrinkage cracks) 1st to occur in life of painting.

Generally penetrate only one layer, aperture often wide, underlayer exposed.

Generated by internal, mechanical stresses in paint, occuring on drying, as solvent (whether aquaeous or organic) evaporates.

Shrinkage forces in rapidly drying upper layer over a slow drying plastic layer leads to alligator-like pattern of cracking.

Exacerbated by insufficiently aged grounds, or underlayers too slick, rich in medium.

May begin as checking - ruptures in paint which don't penetrate to an under - layer, can develop into cracks as bottom widens.

Usually complex forked or branched pattern, aperture frequently wide and

But insecurity is generally <u>slight</u>, doesn't usually lead to cleavage. Often occurs in dark colors over white, common to yellow ochre.

B. Age cracks (mechanical cracks) occur as paint film ages, becomes brittle.
Narrow aperture, lineal patterns.

Usually penetrates more than one layer - often down through the ground. Brought about by dimensional changes in support (canvas, wood) in response to fluctuations of temperature and relative humidity. Aged paint can no longer accommodate stresses of constant expansion and contraction.

When strength of ground and paint film is exceeded - cracks develop to relieve strain.

Similar cracks can result from <u>mechanical</u> forces external to painting.
Striking from face or reverse, stamps or writing on reverse, exposure to moisture, etc.

Tension produced is perpendicular to pressure and radiates outward.

Patterns and Types of Mechanical Cracks

"Concentric" - radiating outward from point of impact.



p. 2 - Laminar Disruptions in Paint Film

(patterns and types of mechanical cracks cont.)

"Feather" - blows from reverse, common in corners from keying out stretcher

"Semi-Concentric" - along edges, from stretching or finger pressure in handling

"Stretcher creases" - straight line of cracks in ground and paint layers of paintings on fabric - following inside edges of stretcher members or edges of cross members - caused by flexing of fabric against edges.

Vibration of travel may compound effect.

"Ground cracks" - common to modern paintings - cracking originates in priming layer (which is usually more brittle than paint). Paint layer still uncracked or only visible under microscope.

Gently rounded - like burrows under surface

III. Related Terms

"Wrinkled paint" - excess of medium, generally doesn't crack

"Cupping" - as paint film dries, compressive forces create a volumetric change.

Surface dries and contracts first - exerts surface tension on paint below

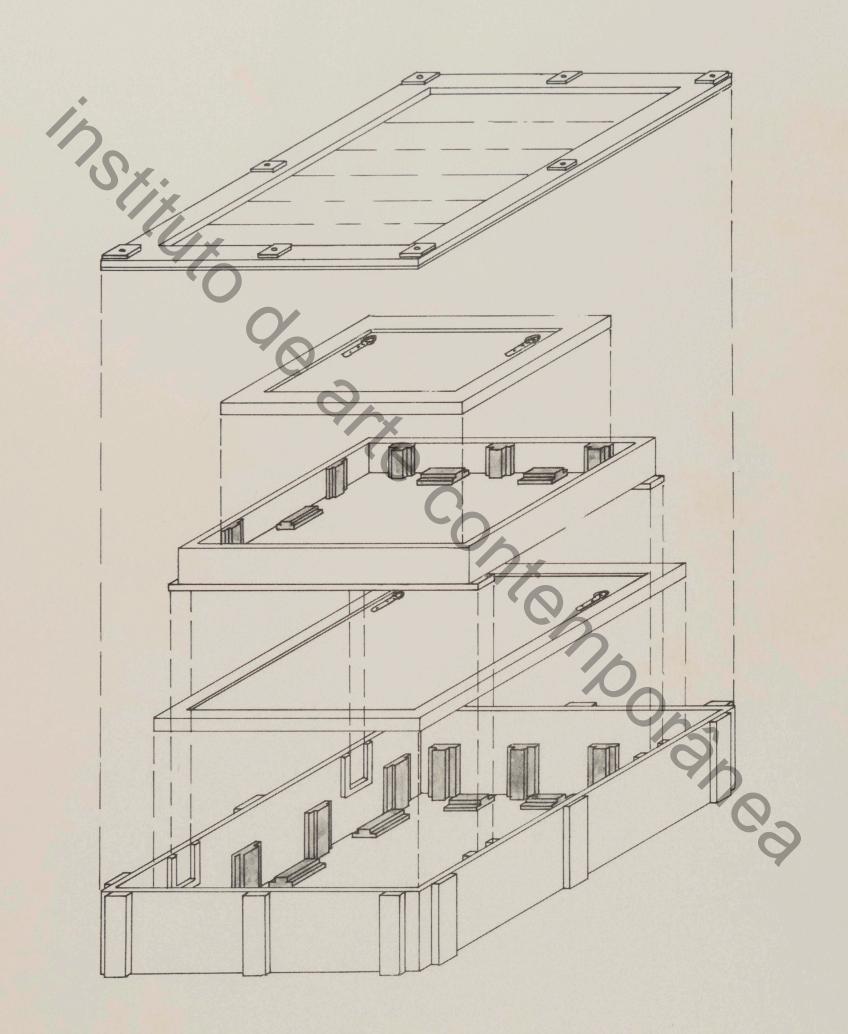
it-curls up between cracks and forms concavity.

Can lead to distortion of fabric support as well.

IV. Cracks in Wood Panels

Check - a rupture in wood along the grain and less than the length of the piece usually caused by accelerated drying at the exposed end grain.

Split - rupture running along grain from end to end.



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Taping Glass on Works of Art

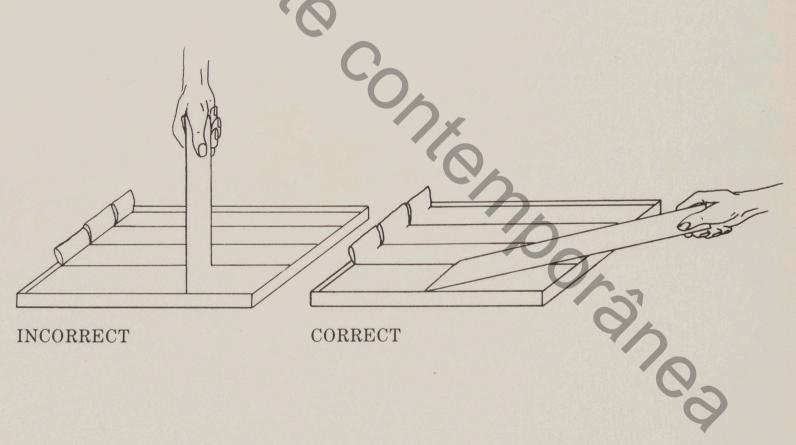
The Museum tapes glass on works of art in transit as a protection against damage should the glass break during shipment. Fragments of broken glass adhere to the tape rather than fall onto the surface of the work.

1. Use masking tape or a similar pressure-sensitive tape.

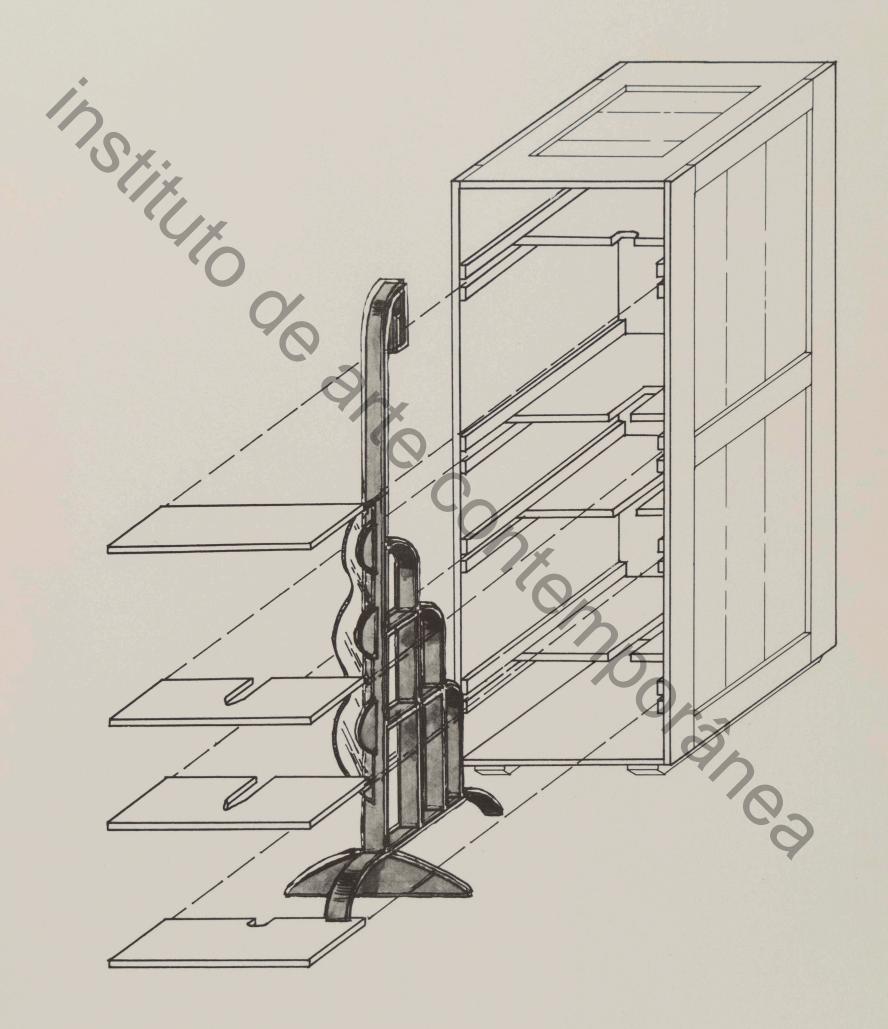
Tape should be applied in parallel strips which overlap slightly, or at most are ½" (0.6 cm) apart.
 Tape should not cover any part of the frame as adhesive

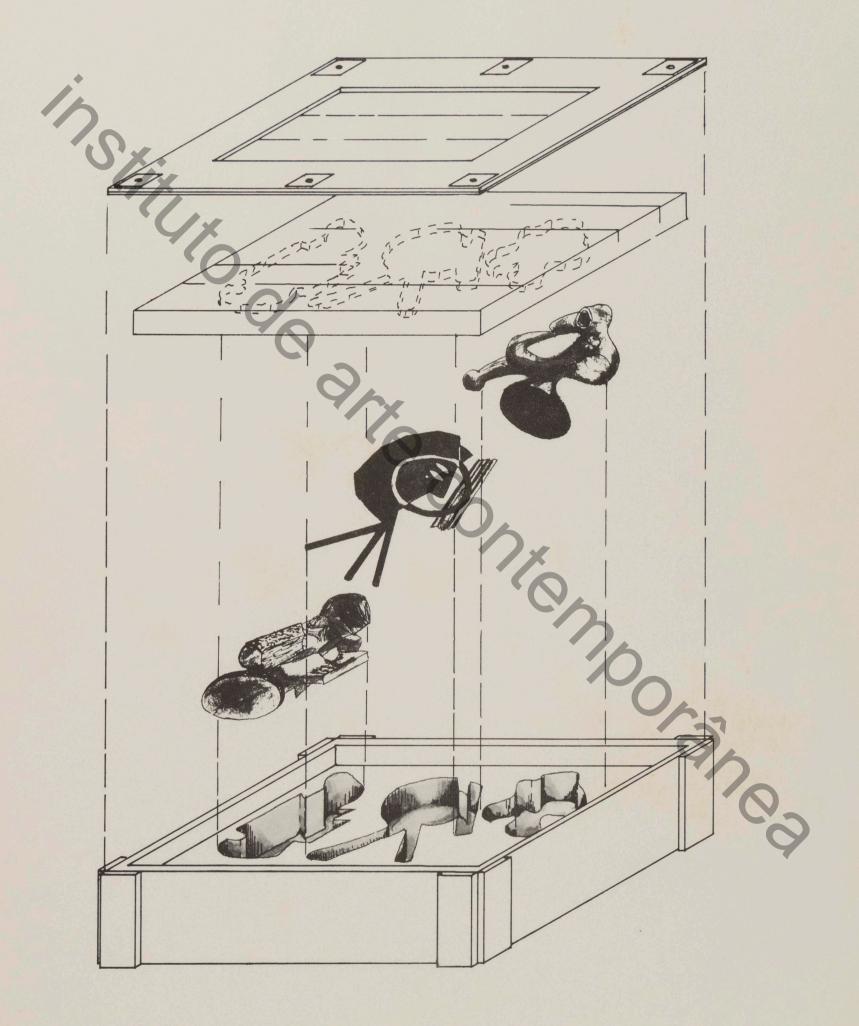
can damage surface.

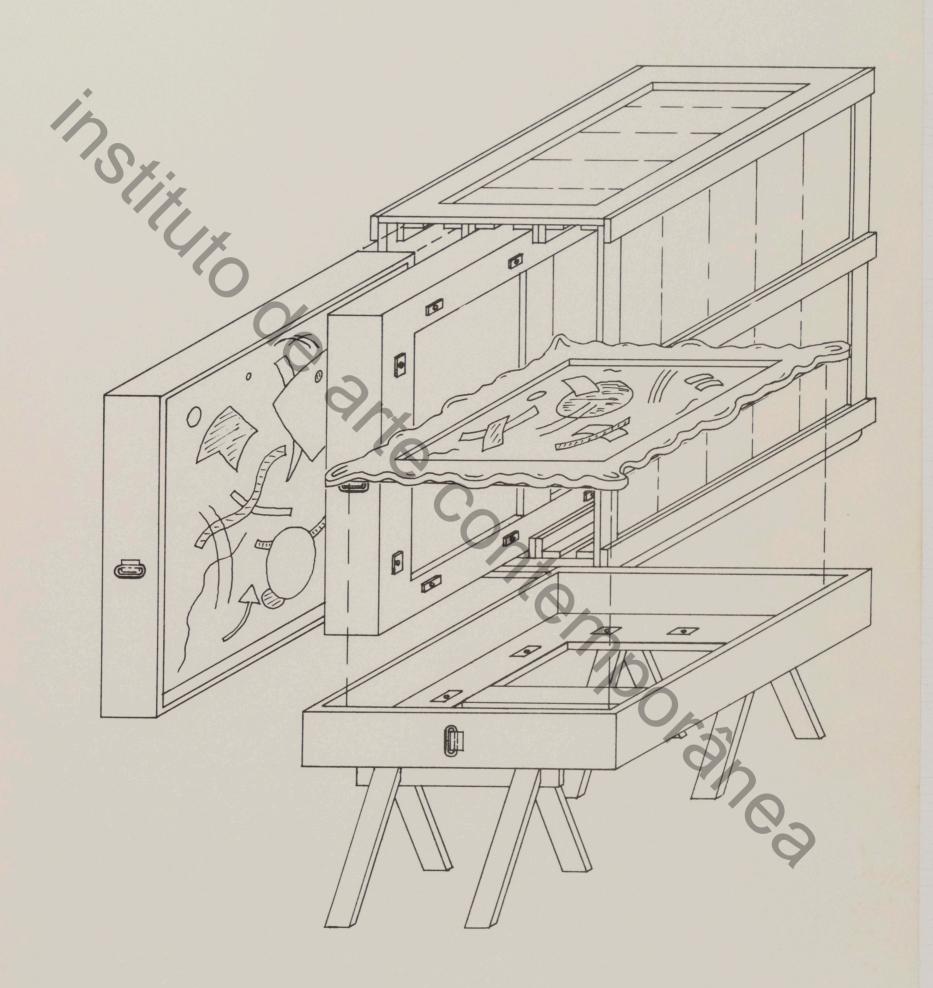
4. It is easier to remove tape if one end is doubled over against itself. To remove tape, pull each strip back SLOWLY along its own length. DO NOT pull it at right angles to the surface as the strain can break the glass.

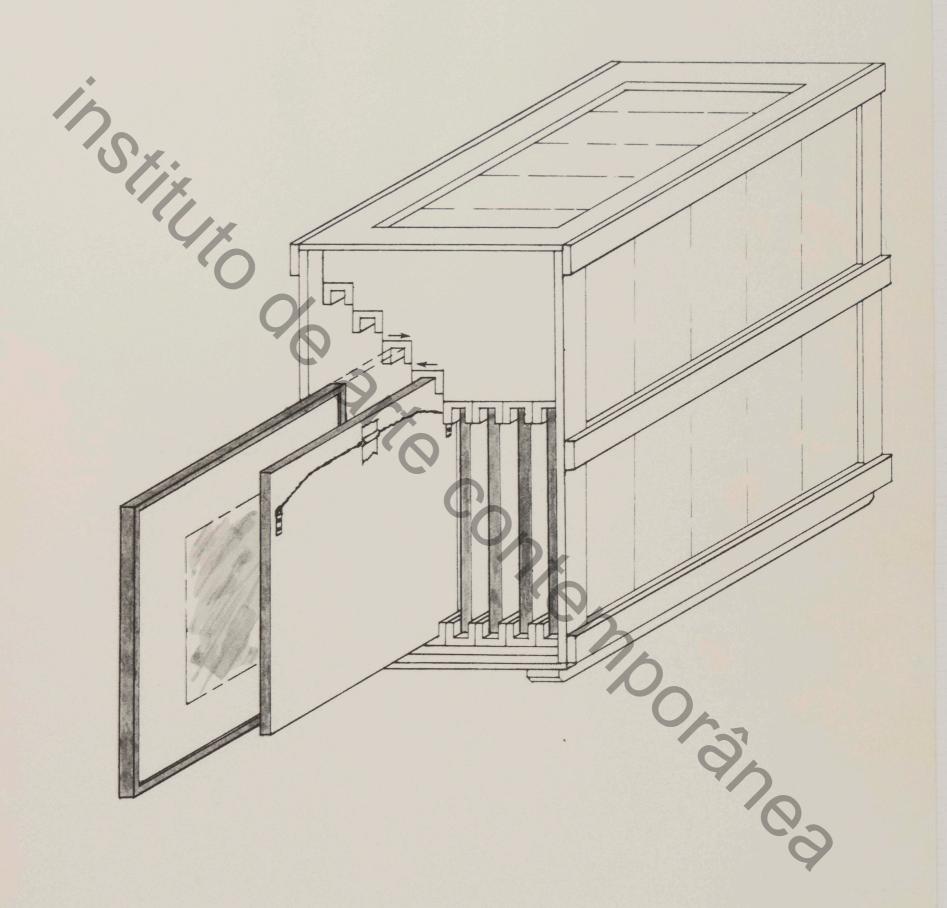


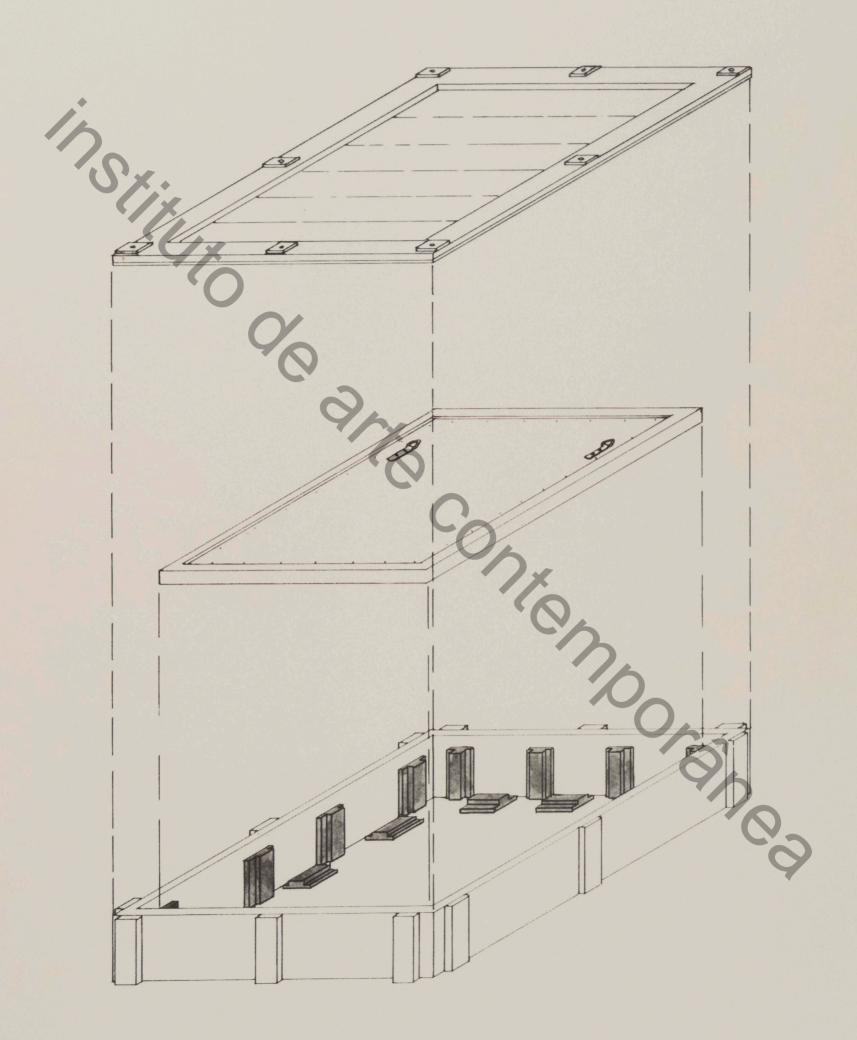
Please Note: Plexiglas SHOULD NEVER BE TAPED as it is impossible to remove adhesive marks.











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Flat Pack Case

Unglazed works should be wrapped in glassine or other clean, porous material. To protect frames, corners of framed works should be wrapped with polyethylene foam or kimpack-type material pads fitted diagonally around the front of each frame corner and stapled or taped to the back of the frame.

Slot Pack Case

The interior floor of the cases should be constructed with indoor/outdoor carpet padded wood runners with front and back sponge rubber bumpers and sponge rubber under tracks to absorb shock. Paintings with delicate or elaborate frames should be packed in travel frames or inner cases which then slide into the box slot. The works within the case should be placed face to face, back to back to prevent picture wires from scratching surface of work. In addition, paintings placed in outer slots of the case should face inward.

Works in travel slot case do not need wrapping material.

Object Case

The interior construction for a three-dimensional object should allow the object to fit into a cavity cut out to fit its contour. The cavity should be made out of polyether foam and then covered with a soft flannel-type material. The same polyether foam and flannel should be fitted on top of the object as an interior covering.

Brace Pack Case

Braces slide into tracks securing sculpture in case. Braces should be cut to fit the contour of sculpture. Section of brace that touches sculpture should be padded with sponge rubber and felt. Placement of braces depends on nature of sculpture. Sponge rubber should be placed between the interior floor and exterior of case to absorb shock.

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General

Cases must be made of solid wood at least $\frac{3}{4}$ "(1.9 cm) thick or plywood at least $\frac{3}{8}$ "(0.9 cm) thick. The thickness of the wood should be increased for unusually heavy objects.

Cases must be lined with waterproof paper stapled or glued, NOT NAILED, to the case. Works should be "floated" or cushioned with resilient material or padded braces. Edges and corners of cases should be beveled to reduce the danger of splintering.

The cover of cases must be fastened with screws, NOT NAILS. Lids of all traveling exhibition cases should be secured with plate and bolt fasteners as screw holes tend to strip after repeated use.

The exteriors of larger cases must be reinforced with riding battens for safe forklift handling.

Double cases should be provided for extremely fragile objects.

Mark the outside of cases with International Symbols: broken goblet, umbrella, etc. DO NOT put any indication of contents on outside of case, such as the words "works of art," "painting," or name of the artist. Arrows should indicate position of case.

Unglazed works should be wrapped in glassine or other clean, porous materials. DO NOT wrap in materials which may cause condensation, such as plastic.

Works under glass should be completely taped. Works under plexiglas SHOULD NEVER BE TAPED as it is impossible to remove adhesive marks.

GLOSSARY OF TERMS USED IN THE REGISTRAR'S RECORDS TO DESCRIBE THE CONDITION OF PAINTINGS

The following list of terms should be adequate to describe nearly all conditions found by visual inspection of paintings. It is not intended as a guide for use in the conservation laboratory.

The list has been divided into three main sections:

- I. Conditions indicative of damage through external cause.
- II. Conditions indicative of <u>deterioration</u> without external cause, including signs of <u>inherent vice</u>.

III. Conditions indicative of either damage or deterioration.

Terms listed below appear in CAPITALS at the beginning of their own definitions, underlined when used within the definition or in connection with the definition of another word.

I. DAMAGE is an undesirable change in condition caused by some "external force."

DESTRUCTION is total loss caused by some "external force." Financial losses through damage and destruction can generally be covered by insurance.

The "external forces" responsible for damage and destruction are:

- A. Contact with solid objects
 - 1. Friction
 - 2. Impact and pressure (The results are often indistinguishable.)
- B. Fire, heat, or very intense light
- C. Liquids
- D. Accretion
- E. Vermin
- F. Corrosive substances

Conditions classified as damage are:

A - 1. FRICTION

ABRASION: Any condition which is the result of friction between a painting and another object.

FRAME RUB: See below under Wear and Tear.

GOUGE: A scrape or scratch combined with a dent or dig.

RUB: A local abrasion showing as a change in color or texture, but with no break visible to the naked eye. There may also be some deposit of foreign matter from the damaging object.

SCRAPE: A local abrasion causing loss, displacement or pulverization visible to the naked eye. Cf. blanching, below under Liquids. SCRATCH: A linear scrape apparently caused by a sharp point.

SKINNING: General abrasion of a whole surface or an extended area caused by deliberate use of abrasives or solvents in an effort to clean or alter the painting. Sometimes, especially in modern works, intentional skinning is a feature of the technique in which the picture is painted.

A - 2. IMPACT OR PRESSURE

In describing describing painting has been damaged from the painting has been damaged from the AGE CRACK: See below under Inherent Vice.

CHIP: A small piece of paint or other brittle material broken off by a blow, or a place where such a piece appears to have been a blow, or a place where such a piece appears to have been subjected to

circling a point at which a painting has been subjected to pressure or impact. Such cracks often begin in the invisible ground layers and do not become apparent until they extend to the surface, perhaps years later.

CRACK: See below under Thermal Shock and Atmospheric Moisture. CREASE: A lasting depression or ridge along the line of a fold in

paper, fabric, or other sheet material.

CUT: A clean slit with nothing missing and no ragged edges.

DENT: A lasting local depression, often in association with loss, cleavage, abrasion, etc., which should be mentioned as a separate condition.

DIG: The damage caused by penetration of a surface by a point which does not puncture the primary support.

FLATTENING: The distortion of malleable paint under pressure, as in the lining process. Paintings with impasto can now be lined without this unpleasant side effect.

GOUGE: See under "abrasion" above.

HERRING BONE CRACKS: Age cracks in a "herring bone" pattern showing the path of a scrape or rub, usually against the back of a canvas support. Like concentric cracks and radial cracks, they may not appear until long after the damaging incident.

HOLE: An kind of aperture through the paint film and primary support, usually with some material missing.

PIN HOLE: A puncture of about the diameter of a pin, not necessarily made by one.

PUNCTURE: An aperture pierced through the paint film and primary support, with no actual loss of material.

RADIAL CRACKS: The same as concentric cracks except that they radiate from the point of impact or pressure.

SLASH: A cut combined with tearing and/or indentation and/or loss. TEAR: A break in fabric, paper or other sheet material as a result of tension or torsion.

B. FIRE OR HEAT

BURNING: The combustion or decomposition of materials under exposure to extrema heat, intense light, or prolonged dryness and heat. CHARRING: Partial reduction to cinder. COCKLE: See below under Distortion of Support.

DESICCATION: See below under Atmospheric Moisture. FADING, BLEACHING, ETC .: See below under conditions indicating either damage or deterioration.

PARCHING: Desiccation or shriveling as an effect of heat.

SCORCH: A change in color or texture through burning or contact with pulp paper.

SINGE: Combustion at the tips, ends, or edges only. SMOKE DAMAGE: See below under Corrosive Substances. SUNBURN: Tanning or darkening of material, especially paper, by exposure to direct sunlight or other strong light.

C. LIQUIDS

BLANCHING: The opaque, whitish appearance of paint or varnish caused by the leaching out of certain substances or by the pulverization of paint or varnish under pressure as in a scrape or scratch. In either case minute interruptions within the varnish or medium refract light producing a milky appearance. Moisture is often to blame.

RUNNING: Loss or displacement of pigment through solution of the

binding medium.

STAIN: See below under Accretion.

D. ACCRETION

EFFLORESCENCE: A powdery crust formed on a surface when substances in paint, plaster or varnish migrate to the surface and crystallize upon contact with the air.

FINGERPRI.TS: Soiled imprints of human extremities.

FOREIGN MATTER: Any material not put into a painting by the artist or by a conservator. Most paint surfaces are sticky at one time or another and almost anything will stick to them. Brush hairs embedded in the wet paint are foreign matter that can never be removed unless some paint is lost too. Deliberate inclusions are not foreign matter. When possible specify what the foreign substance is.

RUNS: Spotting or staining in streaks showing the course of a drop or stream of liquid over the surface. Same as "drips."

SMOKE DAMAGE: See below under Corrosive Substances. SOILED: Spotty or blotched, due to uneven accretion of a thin film of foreign matter held by oil, grease, or a static change.

SPLASH: Spots or stains showing the pattern of liquid scattering on

SPOTS: Small areas where the paint surface is covered or stained by some foreign matter of another color.

STAIN: A spot caused by foreign matter in solution penetrating a porous material and leaving deposits of another color.

E. VERMIN

Although vermin are not a feature of a "normal" museum environment today, their depredations are generally excluded from insurance coverage.

FLY SPECKS: Small spots or pits caused by the corrosive effect of substances in the excrement of insects.

WORM HOLES: Tunnels made by the larvae of insects in wood, books or other vegetable matter.

F. CORROSIVE SUBSTANCES

DECAY: See below under Thermal Shock and Atmospheric Moisture. SCORCH: C.idation, especially of paper, by contact with pulp paper or atmospheric impurities, causing weakness and discolcration. See also above under Fire and Heat.

SMOKE DAMAGE: Deposits of combustion products including substances that will attack the materials of a painting.

DETERIORATION is an undesirable change in condition caused by forces II. present in a "normal" environment or by inherent vice. DISINTEGRATION is total loss caused by forces present in a "normal" environment or by inherent vice. Financial losses through de-

terioration or disintegration cannot usually be covered by insurance.

The forces responsible for deterioration and disintegration are:

- A. Light of normal intensity and wave length
- B. Thermal shock
- C. Atmospheric moisture
- D. Dirt
- E. Fungi
- F. Air currents
- G. Wear and tear
- H. Inherent vice

Conditions classified as deterioration are:

A. LIGHT OF NORMAL INTENSITY AND WAVE LENGTH

All the harmful effects of normal light, such as that of the sky or of an incandescent lamp, are produced more quickly and in more extreme form by very intense light, such as direct sunlight, or by light rich in the more harmful wave lengths, such as that of fluorescent tubes. Conditions produced by intense or unusual light are actually damage and can be covered by insurance.

FADING, BLEACHING, ETC.: See below under conditions resulting from either damage or deterioration.

B. THERMAL SHOCK

C. ATMOSPHERIC MOISTURE

Thermal shock is the internal strain produced when a change of temperature causes the different materials in an object to expand or contract unevenly. The cracking and cleavage that result are indistinguishable from the same conditions produced by fluctuations in the relative humidity.

BLOOM: An irridescent and/or blanched condition of picture varnish caused by decomposition in the presence of excess moisture.

BONING: Bending of the bars of a stretcher under tension, usually caused by shrinkage of the canvas.

CHECKING: The splitting of wood along its grain when it shrinks as a result of desiccation.

CRACKS, CLEAVAGE, ETC.: See below under conditions that may indicate either damage or deterioration.

DECAY: Loss of strength, color, etc. through chemical attack by substances in the atmosphere, or foreign matter, or bacterial products.

DESICCATION: Loss of moisture resulting in permanent weakening, embrittlement and often discoloration, warpage, and shrinking of material, especially of vegetable fibres. It follows prolonged exposure to low relative humidity.

MOLD, "ILDEW, FOXING: See below under Fungi.
WARPAGE: The distortion of wooden parts through desiccation.

D. DIRT

AIR-BORNE GRIME: An even deposit of dust, soot, etc. from the air.

Often a superficial condition, it becomes serious when ingrained. It may then be impossible to remove without skinning.

Air-borne grime contains substances that may act directly to cause deterioration and others that foster it indirectly by attracting and holding moisture.

DECAY: See above under Thermal Shock and Atmospheric Moisture. FINGERPRINTS: See above under Accretion.
SOILED: See above under Accretion.

E. FUNGI

Fungi may be regarded as a secondary effect of atmospheric moisture. They cannot exist unless the relative humidity consistently exceeds 68%.

FOXING: Brown spots or "freckles" in paper, a kind of mildew.
MILDEW: A whitish coating or discoloration due to fungi.
MOLD: A growth of minute fungi as a downy or furry coating.

F. AIR CURRENTS

Air currents cause motion, which leads to cracking. See below under conditions which may indicate either damage or deterioration.

G. WEAR AND THAR

FRAME RUB: A mark of wear, friction or pressure at the extreme edge of the front surface of a painting where it has evidently been in contact with the rabbet of a frame. Often accompanied by spots of gilt or other frame paint.

FRAYING: Raveling of threads or fibres of a fabric.

MISSING KEYS: Lack of a full complement of keys for the joints of a stretcher. The keys can easily be replaced as they are not an integral part of the work. Keys that have fallen out of their integral part of the slots frequently wedge between the streether slots frequently wedge cracks.

NEAR: Erosion of materials, usually at the edges, as a result of represent the streether slots frequently wedge between the streether slots frequently wedge cracks.

NEAR: Erosion of materials, usually at the edges, as a result of represent the streether slots frequently wedge between the streether slots frequently at the edges, as a result of represent frequently wedge between the streether slots frequently wedge between the slots frequently wedge

INHERENT VICE: Any circumstance in the manufacture of an object that makes deterioration inevitable under normal conditions or sometimes under any conceivable conditions. It results from the use of unstable materials or from the combination of materials that are mutually incompatible. Loss due to inherent vice cannot be covered by insurance.

The following conditions are always the result of inherent vice:

BLEEDING: The spreading of pigments, especially dyes, into adjacent areas.

DRYING CRACK: A crack, usually in the uppermost layer or layers, not fractured but caused by the pulling apart of the paint as it contracts on drying. Often the color of the underpaint will show in the cracks. This condition does not worsen once the pai.t is completely dry.

CLEAVAGE, FLAKING: See below under conditions indicating either damage or deterioration. But these are very often due to inherent vice.

GRANULAR: Lacking in binding medium, as particles of pigment remaining on the surface after medium has sunk in.

LEAN: Short of medium, but not actually granular.

PENTIMENTO: The gradual showing through of forms painted over by the artist or restorer as the overpaint becomes more transparent with age.

SEPARATION: Another name for drying cracks. Don't say crocodiling. SHRIVELING: Corrugation of the surface of thick paint caused by un-

even drying. SINKING IN: The loss of medium from paint into deeper layers of porous material such as the support, ground, or lean underpaint.

TACKY: Solidified but still sticky, not properly hardened. WET PAINT: Paint that has not yet solidified but remains liquid or in the form of paste. Some improperly mixed paint never dries. Very thick paint often forms a surface "skin," which isolates the rest of the paint from the air preventing or delaying its solidification. When such a skin is punctured the liquid may run out and over the picture surface.

III. The following conditions may indicate either damage or deterioration:

A. CRACKS

AGE CRACK: Fractures caused by internal or external pressure upon a brittle paint film. Although age cracks may begin in a single layer of paint, they eventually extend through the whole thickness of the paint film. This is a general term for all cracks in the paint other than drying cracks and is slightly misleading in that "age" cracks may begin at any time after the paint has hardened, sometimes with applied.

applied.

CONCENTRIC, RADIAL and HERRING BONE CRACKS: Age cracks in certain seem of the second patterns resulting from external pressure. See above typical patterns resulting from external pressure. the paint has hardened, sometimes within an hour after it is

typical patterns resulting from external pressure. See above

under Impact or Pressure.

CRACK: A fracture or fissure in any surface, especially a paint film.

No loss is implied. CRACKLE: A fine, uniform network of interconnected cracks. The word "crazing" means the same thing but is used in reference to

DRYING CRACK: See above under conditions due to inherent vice.

B. CLEAVAGE

Cleavage is the most serious of all common conditions of paintings. It is very often due to inherent vice.

BLIND CLEAVAGE: Cleavage which is not yet exposed by any cracking. Except in the case of blisters, blind cleavage usually cannot be detected without laboratory examination.

BLISTER: Lifting of a convex dome of paint over an area of blind cleavage, leaving an air space between the paint film and

CLEAVAGE: The lack of a bond between consecutive layers of paint or

between the paint film and its support.

CUPPING: Lifting along the edges of age cracks surrounding an "island" of paint so that the paint surface is bent concavely into the shape of a cup. See also under Distortion of the Support: in rare cases cupping may involve the support as well. as the paint film.

FLAKING: Loss of sections of the paint film or the upper layer or layers through a combination of cleavage and cracking.

LIFTING: Curling of a paint film away from the support or underpaint along cracks. Lifting is impossible without both cleavage and

LOSS: Unauthorized absence of any part of the paint or ground. PEELING: An extreme case of lifting, common in old house paint but

fourd also in pictures.

TENTING: Lifting of adjoining flakes of paint because of shrinkage of the support or expansion of the paint film.

VOID: A place where paint is missing from the picture surface. But a place that was left bare by the artist doesn't count. Also called "lacuna" or "laguna" in some old records.

C. DISCOLORATION

BLANCHING: See above under Liquid.

BLEACHING: Lightening of color through exposure to light and/or

chemical agents.

DARKENING, BROWNING, YELLOWED, ETC.: Self-explanatory.

FADING: The loss of intensity of pigment, especially in tints, through exposure to visible or other light.

BUCKLING: Any lasting distortion of paper or fabric, persisting even if the sheet is removed from its stretcher or mount.

bulge, or ripple, often a sign of desic-

cation.

CREASE: See above under Impact or Pressure.

CUPPING: Lee also under Cleavage, above. But in rare cases cupping paint may draw the canvas up with it into a series of ridges and hollows. In this case there is no cleavage.

DRAWS: Temporary ripples converging toward a corner, usually due to uneven stretching.

RIPPLING: Wavy buckling or cockling.

TWISTING: Characteristic distortion of a flimsy stretcher when the two sets of opnosite corners are forced into different planes. WARPAGE: See above under Thermal Shock and Atmospheric Moisture.

WRINKLING: General creased or rumpled appearance.