

1 SHAPE

Vertical Rectangle

2 SIZE

height a) 0.641 m. width a) 0.499 m. thickness a) 2.4 mm.
 b) 0.651 m. b) 0.509 m.
 c) description of measure a) original support - painted area
 b) overall, incl. manogany additions

3 FRAME

4 MOUNTING

5 DISTINGUISHING MARKS

Two lines of inscription across top (abraded)
 "D. Martinus Lutherus
 Natcebatyr lilebrae (?) Anno amato Salvatore MCCCLXXXI, Vn decimo (?)
 ante Calendas Novembris Hora x postmeridiam"
 Date "1546" with manogram at left of head
 Faint ghost of all inscriptions - [cf photo 865.1941(a)] at right of head -
 probably originally a metal with vertical acoustics.

6 TECHNICAL HISTORY

Photograph suggests that the mahogany casing and the accompanying reconstruction was done in the absent part - perhaps 20-30 yrs. ago, before the paul was cracked. at this time it would appear that the painting had been cleaned; with, perhaps abrasion of inscriptions, coated thickly with oil, repainted, varnished.

7 PHOTOGRAPHS

ordinary - date unknown - before cleaning 865.1941(a)
 " " " " " " " " after 865.1941(b)
 x-ray (defective) no date - print only # 466
 infra red Jan 26, 1950
 x-ray - (stereo) Feb, 13, 1950 (8x10) # 3605 865.1941(c)

8 NOTES: X-RADIOGRAPHS

Vermicular shadows in the head caused by fibrous binder between wood and ground; - confirmed by examination of ground exposed in crack -
 to be a scattering of tools.
 Very little evidence on nature of paul construction or wood of paul.
 Lack of grain structure peculiar. Old x-ray shows tons distributed largely in upper part of painting. Nails - modern, not evident visually shown in x-ray.

9 NOTES: INFRA-RED PHOTOGRAPHS

Under drawing - delineation of features in sultrics, the definition of shadows in hatchings, clearly evident in infra-red. (p. 2)
 no evidence of extensive repainting, except spotted retouching in lower, and some reinforcement of lines in the hair.

10 NOTES: ULTRA-VIOLET FLUORESCENCE

No conclusive evidence of condition ~~not~~ observed.

EXAMINER R. D. Buck

DATE 20 February 1950 (at req.)

NO.

865.1941

OWNER

Paul J. Sachs

ARTIST

Klein Buchach

SUBJECT

Portrait of Martin Luther

DESCRIPTION OF MATERIALS AND CONSTRUCTION

medium density

SUPPORT
 11 material Presumed to be a diffuse porous ~~hard~~ hardwood of ~~low~~ ^{low} specific gravity such as Linden or (Lind) (Filia)
 12 fabrication grain vertical
 13 no. members not wident, perhaps one only.
 14 joins none wident
 15 color light
 16 surface character smooth
 17 auxiliaries (see 18)
 18 former treatment original support hidden in mahogany casing. original panel appears thinned, over which a thin layer of pine (?) grain at 45° (right) was glued. over this mahogany - ca 3/4" thick, ribs glued, 2 members joined. Mahogany strips at all edges.

GROUND
 21 layers (lowest first) 1 - fibrous binder of tow, probably in eye x. 2 - gesso
 22 materials
 23 structure
 24 thickness 1/2 mm. or less over all
 25 fibrous binder tow see 21
 26 color white
 27 conformation smooth
 28 former treatment

PAINT OR DESIGN LAYERS - typical areas

a) flesh	b) blue background	c) black drapery
31 layers (lowest first) 1 - drawing - delineation, hatching 2 - pink body tone 3 - accents - dashes - lights.	1 - blue	1 - black flat tone 2 - modelling (conjectured)
32 medium 1 - } all oil (est) 2 - } 3 - }	oil (est)	oil (est)
33 pigments 1 - black	azurite + white lead	
34 structure 2 - rich 3 - parts	parts	rich reticular
35 thickness 2 - very thin 3 - sb. body - lights; very thin - dashes.	mod - ca 0.1 mm.	very thin
36 handling 1 - drawn lines - dots 2 - smooth 3 - lights - sb. brushwork	sb. brushwork	smooth
37 transparency 2 - marked - drawing (?) visible 3 - dashes - marked; lights - opaque	opaque - visually 0.5x-ray	
38 solubility 1 } 2 } insol. in organic solvents 3 }	insol.	sb. sol. in methylol insol. in organic sol.
39 former treatment losses retouched - hair reinforced.	retouching	some general scumbles of dark paint over losses.

SURFACE COATING
 41 materials
 42 layers 1 - Resin-oil or oil layer 2 - resin 3 resin
 43 solubility 1 - sol. only in NaOH or hypochlorite 2 - sol. in organic solvents; - acetone, alcohol, ethyl alcohol
3 - made in ethyl dichloride.
 44 thickness 1. very thin 2 mod.
 45 original color 1. colorless (est) 2 colorless (est)
 46 former treatment three films probably applied at time of reconstruction; former cleaning clearly evident from photography

DESCRIPTION OF CONDITION

50 weakness of materials Support - weakened by thinning and by insect activity.

Paint - Black paint seems subject to solvents, which have caused streamlines.

51 defects in construction The present construction is such that normal shrinkage of the upped wood, front and back, is inhibited by the crossed layer of pine. This has undoubtedly brought about the split in the front and the disjoin on the back. In addition, the 45° attitude of the intermediate layer may be blamed for the twist in the panel.

52 crack-tear - split - see photograph (D)

53 disjoin - mahogany backing - (see G)

54 cleavage - minor along split. Sl. cleavage along lower edges, at corners

55 crackle - sparse linear, little branching, not obvious.

56 missing part

57 hole

58 flaking-chipping - Principally along bottom edge

59 abrasion - marked abrasion of inscriptions of photos A and B
Streamlines in black drawing -

abrasion of drawing impossible because much of it lies under the body tones in the lowest layer. Degree of abrasion of upper layers hard to estimate, probably moderate in all.

60 bulge-warp - slight convex warp (3.5 - 5 mm) greater at bottom than at top, causing a twist.

61 wrinkle-draw

62 crease-groove

63 scar-dent

64 mold damage

65 insect damage

66 corrosion

67 darkening - moderate - marked.

68 yellowing - moderate

69 fading

70 blanching

71 crazing

72 accretions

73 dullness - moderate general dullness.

74 opacity

75 scratches

80 GENERAL

The structural defects (51) must be corrected to permit closing the split. This will require removing the complex two layers, and rebuilding with simpler materials whose strength is near that of the original panel.

Cleaning does not appear to be difficult or abnormally hazardous, and is recommended for the sake of the appearance of the painting. Extensive retouching does not seem indicated.

81 SUMMARY OF CONDITION

82 Structural insecurity *Marked - see 57*83 estimated extent of treatment *ca. ten days*84 urgency of treatment *loose paint needs treatment soon.*85 Permanent damage to design *Slight - due largely to waxy, split and abrasion*86 Temporary disfigurement *Marked due to open split, discolored repainting and surface loss.*87 estimated extent of treatment *ca. ten days*

88 BRIEF NOTES ON TREATMENT OR CARE

Remove waxy supporting support and replace with balra. linen in wax.

Clean.

Repaint

Recoat

[8] Purpose of Analysis _____

[9] Photographs _____

[10] Description of Samples

Location	Color	Analysis
[1] h 0.570 w 0.0	Blue of back ground	Blue recognized as azurite in a matrix of white lead. on basis of particle characteristics and optical properties. Microchemical tests for Pb and Cu both strongly positive.
[] h w		The sample examined carried a little of the ground and some fibers of the tow which are easily observed in the x-ray. Fibers appear to be of linen. Ground effervesces in acid only slightly and only partially dissolves. Microchemically is not characteristically chalk. Another sample of ground would be necessary for identification. Bubbles of the ground is obviously glue.
[] h w		
[] h w		
[] h w		
[] h w		

[11] Remarks

[3] Subject Portrait of Martin Luther
 [4] Owner P.T. Sachs.
 [6] Date Apr 17 1950

[1] Artist or Origin Cranach.
 [5] Address _____
 [7] Analyst R.P.S.

[2] No. 74-4452
695-1741
565.

June 13, 1950

Professor Paul J. Sachs
Hotel Continental
29 Garden Street
Cambridge 38, Massachusetts

Dear Mr. Sachs:

Treatment of your Cranach painting is essentially complete, but before we call it finished I should much appreciate your criticism of its present appearance. Perhaps if you are at the Fogg sometime you could come up to the 4th floor for a few minutes to look at the painting with me.

With my best regard, I am,

Yours sincerely,

Richard D. Buck
Conservator

[3] Subject

[1] View of Origin

Cranach

[1] M. I.

Record of Treatment

Year	Month	Day	Hour	Description of Treatment	Remarks
1950	March	14	3-4	Solubility tests on surface coating	
				Naphtha - unaffected in 5 min	X
				Toluene - " " "	X
				ethyl alcohol - sol at surface, jil throughout in 5 sec in 5 sec.	D
				ethylene dichloride - jil developed gradually removable in - thin coatings in 15 sec thick coating in 30 sec sol-jil state, immobile in separated flocculent masses - 2 min.	C
				acetone immediate sol of upper part, jil throughout in 10 sec. except for sol produced in upper part the gel resembled that produced by ethylene dichloride, but with a 10 sec exposure.	D
				In the lower left corner small areas were	
				1) washed with water	
				2) washed with soap and water	
				3) washed with carbon tetrachloride.	
		15	9	The lower left corner was sprayed very lightly with ethyl alcohol, (+ cellosolve), + acetone alcohol.	X
			3-4	Solubility tests repeated.	
				Naphtha - no effect on any part	X
				Toluene	
				1) washed with water slight jil in 15 sec. granular jil in 4 min. (not removable)	B-A
				2) washed with soap and water removable jil in 15 sec	C
				3) washed with CCl ₄ removable jil in 15 sec.	C.
				Similar comparisons evident from tests with rolling swabs.	

Owner P. J. Sachs

Work "Crumble," Part. of "The"

No. 865.1941

Year	Month	Day	Hour	Description of Treatment	Remarks
1930	March	15	3-4 ³⁰	<u>Surface coating</u> Regenerated with spray solution used previously - at 9 o'clock.	RDB
		16	10 ¹⁵ -11 ⁴⁵ 2 ⁴⁵ -4 ¹⁵	Cleaned with ethylm. bicarbonate,	
		17	11 ³⁰ -12 4 ³⁰ -5	with residues taken up in deep acetone soaks.	photographed 21 March
		20	9 ⁴⁵ -11 ¹⁵		
		21	2 ³⁰ -3 ³⁰	<u>Facing</u> a 20% solution of n-butyl methacrylate in hydrocarbons - was applied in a heavy brush coat. A second coating was added - then thin Japanese paulowny paper was applied and coated with toluene toluene. This caused some of the plastic plastic to be drawn into the paper for a tight, well-adhered facing.	to show retouching [865.1941 (E)] after 1st coating of n-butyl meth.
		22	2 ³⁰ -3 ³⁰		
		23	3-4	<u>Support</u> The mahogany strips at the edges of the panel were removed planed off, disclosing the complicated interior structure suspected at this time of examination. This construction described below and in photos	
		24	4 hrs.	Resin removed over lower part with router and chisel - layers exposed and photographed, g.v.	R.B. J.W.
		27			Photo reverse 865.1941 (F) and, detail 865.1941 (G)

Owner R. J. Sachs.

Work Number "Parting of Surface"

No. 865-1941

Year	Month	Day	Hour	Description of Treatment	Remarks
1950	Jan	27	2	Balance of wood removed. The hardened glue layer, ca 1/2 mm thick, removed with sandpaper.	R.B., J.W.
	Apr	3		<u>Re build delay</u> The surface was treated with a mixture of paraffin + beeswax equal parts, warmed in solvent. No auxiliary heat was used. A layer of linen gauze was irauld onto the wood with wax paste. During this operation the panel was fixed on the press under moderate compression, so as to close the split as far as possible. As the mahogany auxiliary was removed the old wood remained took on an increased warp. The split remained. In rebuilding there was no effort to flatten or even to reduce this warp. - It is expected that the panel will, therefore, be relatively free of internal stresses, and that less damage will develop in the future.	J.W. R.B., J.W.
		4	2 hrs.	Balsa in 1/2 in. thick boards, ca 6" wide were attached with wax filler to the reverse, over the fabric. Three strips were needed to cover the panel. The strips were heated and set into hot wax spooned on the panel. The panel, therefore, was exposed to a minimum of heat. The edges was overlapped by balsa was done	
		6	1	The edges of the balsa construction were dressed to the edges of the panel, and beveled.	R.B.
		10	2 1/2	The linen gauze was turned over the edges and irauld to the balsa. A layer of linen was irauld onto the balsa with wax filled with zinc white. This fabric was carried over the edges to the edge of the panel.	R.B., J.W.
		11	4 hrs.		"
		12	1		
		13	1/2	<u>cleaning.</u> The 1 thin, but darkened film that lay between the paint and surface coating on the resinous part of it, was found to be readily soluble in a mixture of solvents containing a minimum of alkali, ammonium hydroxide, acetone, alcohol & citrate (1:4:4)	R.B.

Owner

P. J. Sachs

Work
Crawford - Paintings of Reuther

No. 865, 1941

Record of Treatment

Year	Month	Day	Hour	Description of Treatment	Remarks
1950	Apr	14	1	was used, followed by acetone as a rinsing liquid. The the paint in all areas, except the black (inscriptions and drawing) were unaffected by the solvent. It is an oven black, therefore, was avoided.	R.B.
		22	3		
		24	1 1/2		
		27	1 1/2		
	May	2	1	The coating over the black was removed with a coating of vinyl acetate in ethyl alcohol and diazane (10% EtOH 1:1 diazane 3). Cleaning in line areas was then accomplished on May 2 by toluene. The painting was coated with PVA.	Penetrant after cleaning
		3	1 1/2		
1950	May	11		The crack opened by the split was luted with a gummy paint tinted to match, approximately the surrounding areas of paint, except at the lower part which was wider and was first filled with white gesso	R.D.B
		12	1/2	Whole surface was again cleaned lightly with toluene, and coated with thin spray of n-butyl methacrylate in preparation for repainting in oil.	
		13	1	The crack, and a few scars and losses at edges, and two or three disfiguring crackle lines were painted in in oil colors with added n-butyl methacrylate.	
		15	1		
		16	2		
		17	1/2	<u>Surface Coating</u> a heavy brush coating of n-butyl methacrylate (20% in turpentine) was applied.	
	June	6	1/2	after drying a heavy spray coat of Polysingl acetate in M ₂ solvent was applied	
		13	1/2	a third coating of hard wax was applied and polished.	
				The painting was provided with skins which fitted the curves of the surface and mounted in its frame.	R.D.J.

Owner R. S. Seals

Work Ramak - Portrait of Mother

No. 665-194

1 SHAPE

Vertical Rectangle

2 SIZE

height (a) 0.641
(b) 0.651 m
(c)

width (a) 0.499 m thickness (a) 2+ mm.
(b) 0.509 m
(c)

description of measure (a) original support-painted area
(b) overall, incl. mahogany casing.

3 FRAME

GLAZED

GLAZED

4 MOUNTING

5 TECHNICAL HISTORY DISTINGUISHING MARKS

Inscription:

D. MARTINUS NOTHERUS

(two lines across top)

Nateebator Iilebrae (?) Anno amato Saiaatore M, CCCC LXXXI
Vndecimo (?) ante Calendas Nouembris Hora X post meridiem'

Vague inscriptions containing acrostics to right of head - (unreadable)

Date 1546 with monogram (?) to left of head - (see photograph 865.1941 (a))

These inscriptions much abraded, or lost at time of this examination.

6 TECHNICAL HISTORY

Estimate of work done within last two decades - cleaned, recoated, panel thinned, and mounted in mahogany.

7 PHOTOGRAPHS

- Ordinary - date unknown - before cleaning, - showing no split 865.1941 (a)
- " " " after " split 865.1941 (b)
- x-radiograph - defective - make Barnoughs # 466
- Infra-Red - Jan 26, 1950 865.1941 (c)
- Feb 13, 1950 x-radiograph - stereo - 5x10 # 3605

8 NOTES ON X-RADIOGRAPHS

Periculous shadows in head caused by fibrous binder between wood and ground, observed in painting under magnification (along split) and presumed to be tow. Lack of wood grain suggests a diffuse porous hardwood (or even textured softwood, improbable) instead of oak. The transparency of flesh paint marked contrast & density of blue background. Old wax shows tow covering only upper part of panel, down to level of chin. Stereo x-rays locate tow under the ground. x-rays show little evidence of damage except split, 2 in. long, near top of head.

9 NOTES ON INFRA RED PHOTOGRAPHS

The transparency of flesh tones further demonstrated by I. R. ^{which} show under drawing clearly. Except for split there is no clear evidence of extensive damage or restoration, a few spots of retouching in blue background.

10 NOTES ON ULTRA VIOLET FLUORESCENCE

No conclusive evidence of condensation stains under visual examination.

11 EXAMINER

DATE

NO. 865.1941

OWNER Paul J. Sachs

ADDRESS 1075 Connecticut, Cambridge, Mass.

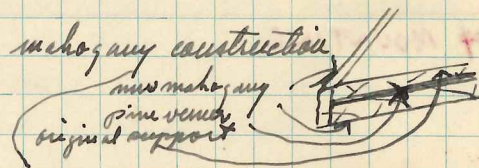
SUBJECT Portrait of Martin Luther

DESCRIPTION OF MATERIALS AND CONSTRUCTION

- 10 support - presumed to be a diffuse porous hardwood of low specific gravity, such as Linden or lime (Lilid). (See 17)
- 11 material
- 12 fabrication grain vertical
- 13 color yellow -
- 14 surface character smooth without prominent figure or grain characteristics
- 15 no. members not clear - perhaps one.
- 16 auxiliaries (See 17)

17 former treatment Original support hidden at back and edges by mahogany construction.

The original panel apparently was thinned, skinned at the back to a flat surface with pine, attached with glue, and covered back and edges with mahogany attached with glue.



GROUND

- 21 materials
- 22 layers (lowest first) 1) pigment ground, fibrous binder, 2) gesso
- 23 thickness 1/2 mm. or less.
- 24 fibrous binder scattered tow over upper part of panel, between ground and wood. (see 8)
- 25 color white
- 26 conformation smooth

27 former treatment some leveling of losses top and bottom edges.

PAINT OR DESIGN LAYER - typical areas a) flesh b) blue background c) black drapery d)

- 31 medium
- 32 layers (lowest first) 32 a) 1-drawing in white gesso, 2) thin pink paint 3) final touches of dark and light modeling, and drawing is secured partially by under drawing which shows through ~~the~~ layer 2). ~~all layers very thin,~~
- 33 pigments
- 34 thickness ~~34 a)~~ all layers very thin, semi-transparent, with few marks of handling, except in under drawing (a) and in hair (3).
- 35 handling 32 b) single layer evident. no modeling,
- 36 transparency 33 c) 34 b) moderate thickness ~ 0.1 mm.
- 37 solubility 35 b) brushmarked 36 b) opaque - visually and dense to x-rays 37 b) Not soluble in organic solvents
- 32 c) single layer evident - almost no modeling
- 34 c) very thin
- 35 c) smooth - no signs of handling
- 36 c) opaque visually - transparent to x-ray
- 37 c) unaffected in organic solvents in normal cleaning procedure.

38 former treatment some retouching of filled losses along bottom edge. some retouching ~~also~~ in blue background.

SURFACE COATING

- 41 layers
- 42 solubility unlimited swelling - immediate in acetone, alcohol.
- 43 original color may have been toned?
- 44 thickness moderate

45 former treatment cleaning and reacting in last two or three decades.

51 weakness of materials Support - wood weakened by thinning (est).

51 defects in construction The present mahogany construction being stronger and more rigid than the original wood, imparts its behavior on that old panel. The open checks, splits and disjoints front and back indicate the internal construction is disturbing the other members by their different behavior. There is no reasonable hope that the split in the old panel can be closed and stabilized until the complex support is simplified and made more subservient in behavior to the original panel.

52 crack-tear
53 disjoin
54 cleavage
55 crackle

- 52 - split vertical through proper right check - see photo (D)
53 - disjoin in mahogany paneling at the back - see photo (E)
54 - Small areas of cleavage, buckled type, along split, esp. in proper R check of face. Flat cleavage along B & edge and in ~~B & R~~ bottom left corner, also at each edge lateral edges about the level of the eyes.
55 - Inconspicuous horizontal linear type with some branching, principally in areas about 1 cm. square along bottom edge.
58 - Comparison of photographs a) and b) shows loss of inscriptions (see 5) General abrasions consistent with that which might account for loss of inscriptions - if they were original and consistent with the balance of the paint - is not evident. Some abrasion of upper layers of paint in flesh on black may be presumed, but extent cannot be estimated at the time of this examination.
59 -

56 missing parts
57 hole
58 flaking-chipping
59 abrasion

60 bulge-warp
61 wrinkle-draw
62 crease-groove
63 tear-deat

64 mold-damage
65 insect damage
66 corrosion

60 - slight convex warp having vertical axis. Curvature at bottom ~~top~~ is greater (5 mm) than at top (3 1/2 mm) producing a slight twist.

67 darkening
68 yellowing
69 fading
70 blanching
71 crazing

64-65 none evident

67-68 - Surface coating moderately yellowed, markedly darkened, see photo (D)

72 accretions

73 surface defects 73 - surface coating generally dull.

GENERAL

80

Two principal defects are the structural design of the support which apparently has caused 1) a split in the original support and 2) a disjoin in the mahogany backing, and 3) the disfigurement caused by discolored varnish.

~~To correct the structural design of~~

the disfigurement caused by the split can be corrected only by reconstruction and simplification of the present complex construction of the support. Filling the crack and imperfections to correct this blemish is not recommended ~~as~~ until some assurance can be established that further movement along the crack has been arrested.

There is no reason to expect that cleaning will be abnormally complex, nor that the process would disclose extensive losses or abrasions requiring much retouching.

SUMMARY OF CONDITION

81 Structural insecurity Marked, because of the complex construction of support (see 51, 52)

82 estimated duration of treatment: hours 10 days weeks

83 calculated urgency of treatment ~~attach~~ soon paint (see 54) ^{should be} attached as soon as possible. Balance of structural treatment ^{is} strongly recommended.

84 Permanent damage to design Moderate from split, and abrasion.

85 Present ^{Permanent} disfigurement Marked because of split and pitted, darkened surface coating

86 estimated duration of treatment hours 10 days weeks

A BRIEF PROPOSAL FOR TREATMENT, OR CARE.

87

1. Clean
2. Fill
3. Remove mahogany and other auxiliaries
4. ~~Fill~~ split with waterproof adhesive
5. Apply moisture barrier — stiffening layer of balsa wood or expanded material with wax adhesive. Keep heat at minimum
6. Cover with fabric.
7. Remove fabric
8. Compensate any major losses