# 1968 ANNUAL REPORT



Pages 227 through 246 from SMITHSONIAN YEAR 1968 REPORT OF THE SMITHSONIAN INSTITUTION FOR THE YEAR ENDED 30 JUNE 1968 WASHINGTON, D.C.

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# National Gallery of Art

JOHN WALKER, Director



SIR: Submitted herewith on behalf of the Board of Trustees is the report of the National Gallery of Art for the fiscal year ended 30 June 1968. This, the Gallery's thirty-first annual report, is made pursuant to the provisions of section 5(d) of Public Resolution No. 14, 75th Congress, 1st session, approved 24 March 1937 (50 Stat. 51; United States Code, title 20, sec. 75(d)).

## Organization

The National Gallery of Art, although established as a bureau of the Smithsonian Institution, is an autonomous and separately administered organization and is governed by its own Board of Trustees. The statutory members of the Board are the Chief Justice of the United States, the Secretary of State, the Secretary of the Treasury, and the Secretary of the Smithsonian Institution, ex officio. The five general trustees continuing in office during the fiscal year ended 30 June 1968 were Paul Mellon, John Hay Whitney, Franklin D. Murphy, Lessing J. Rosenwald, and Stoddard M. Stevens. On 2 May 1968 Paul Mellon was reelected by the Board of Trustees to serve as President of the Gallery, and John Hay Whitney was reelected Vice President.

The executive officers of the Gallery as of 30 June 1968 were as follows:

Chief Justice of the United States, Earl Warren, Chairman.
Paul Mellon, President.
Ernest R. Feidler, Secretary and Treasurer.
John Walker, Director.
E. James Adams, Administrator.
Ernest R. Feidler, General Counsel.
Perry B. Cott, Chief Curator.
J. Carter Brown, Assistant Director.

The three standing committees of the Board, as constituted at the annual meeting on 2 May 1968 were as follows:

#### EXECUTIVE COMMITTEE

Chief Justice of the United States, Earl Warren, Chairman. Paul Mellon, Vice Chairman. Secretary of the Smithsonian Institution, S. Dillon Ripley. John Hay Whitney. Franklin D. Murphy.

#### FINANCE COMMITTEE

Secretary of the Treasury, Henry H. Fowler, Chairman. Paul Mellon. Secretary of the Smithsonian Institution, S. Dillon Ripley. John Hay Whitney. Stoddard M. Stevens.

#### ACQUISITIONS COMMITTEE

Paul Mellon, Chairman. John Hay Whitney. Lessing J. Rosenwald. Franklin D. Murphy. John Walker.

### Personnel

At the close of fiscal year 1968, full-time Government employees on the permanent staff of the National Gallery of Art numbered 323. The United States Civil Service regulations govern the appointment of employees paid from appropriated funds.

#### Appropriations

For the fiscal year ended 30 June 1968 the Congress of the United States, in the regular annual appropriation, and in a supplemental appropriation required for pay increases, provided \$3,082,000 to be used for salaries and expenses in the operation and upkeep of the National Gallery of Art, the protection and care of works of art acquired by the Board of Trustees, and all administrative expenses incident



The Much Resounding Sea, by Thomas Moran (American, 1837–1926). Canvas, 26 x 62 inches. Gift of the Avalon Foundation.

thereto, as authorized by the basic statute establishing the National Gallery of Art, that is the Public Resolution No. 14, 75th Congress, 1st session, approved 24 March 1937 (50 Stat. 51; United States Code, title 20, secs. 71–75).

The following obligations were incurred:

Personnel compensation and benefits	\$2, 462, 864. 89	
All other items	570, 423. 96	
Total obligations	\$3, 033, 288. 85	

#### Attendance

Visitors to the Gallery numbered 1,267,028 during the year. Average daily attendance was 3,500.

### The Collections

There were 1,878 accessions to the collections by the National Gallery of Art as gifts, loans, or deposits during the year. The following gifts or bequests were accepted by the Board of Trustees:

	PAINTINGS	
Donor	Artist	Title
Avalon Foundation	Moran	The Much Resounding Sea
Mrs. Julia Feininger	Feininger	Storm Brewing
Colonel and Mrs. Edgar W. Garbisch	G. W. Mark	The Swamp Fox



Mrs. Metcalf Bowler, by John Singleton Copley (American, 1738–1815). Canvas,  $50 \ge 40\frac{1}{4}$  inches. Gift of Louise Alida Livingston. At right, Portrait of a Woman, artist unknown (American, painted about 1840). Canvas,  $30 \ge 34$  inches. Gift of Edgar William and Bernice Chrysler Garbisch.

Donor	Artist	Title
Colonel and Mrs. Edgar W. Garbisch	F. R. Mullen	Confederate Blockade Runner and Union Man-of-War
cc	Unknown	A City of Fantasy
	**	Portrait of a Man
66	**	Portrait of a Woman
	44	Still Life: Fruit and Painted Box on Table
£ 6	s c	Stylized Landscape
Louise Alida Livingston	Copley	Mrs. Metcalf Bowler
**	Sharples	John Bard
24		Mrs. John Bard
66	66	Dr. John Bard
G. Grant Mason, Jr.	Lawrence	Lady Hertford
	"	Marquis of Hertford
Eugene and Agnes E. Meyer	Renoir	Nude
National Gallery of Art, Ailsa Mellon Bruce Fund	Jan van der Heyden	An Architectural Fantasy
**	Juan de Flandes	The Temptation of Christ
¢¢	Panini	Interior of Saint Peter's, Rome



An Architectural Fantasy, by Jan van der Heyden (Dutch, 1637–1712). Wood,  $18\frac{1}{2} \ge 27\frac{1}{2}$  inches. Ailsa Mellon Bruce Fund.

Donor	Artist	Title
Mrs. Sigourney Thayer	Kensett	Landing at Sabbath Day Point
	SCULPTURE	
Avalon Foundation	Rimmer	Dying Centaur
Eugene and Agnes E. Meyer	Barye	Tiger Killing a Deer
**	Brancusi	Bird in Flight
¢¢	<b>66</b>	Agnes E. Meyer
66	Despiau	Agnes E. Meyer
cc	Rodin	The Sphinx
National Gallery of Art, Ailsa Mellon Bruce Fund	Maillol	Bather with Raised Arms
66	Prou	Charles, Duc de Berry
	GRAPHIC ARTS	
Frank Eyerly	Kuniyoshi	Bombed Out
"	Marin	The Sea, #3
Colonel and Mrs. Edgar W. Garbisch	Various	7 watercolors
The Heller Foundation	Beckmann	5 drypoints



The Temptation of Christ, by Juan de Flandes (Hispano-Flemish, active 1496–ca. 1519). Wood,  $8\frac{1}{4} \ge 6\frac{1}{4}$  inches. Ailsa Mellon Bruce Fund.

Donor	Artist	Title
Dr. and Mrs. George B. Green	Catesby	13 etchings
Louise Alida Livingston	Saint-Memin L'Aubin	Commodore Tingy Mrs. Tingy
Eugene and Agnes E. Meyer	Marin	5 watercolors
National Gallery of Art, Ailsa Mellon Bruce Fund	Haseltine	A Venetian Lagoon
National Gallery of Art, Andrew Mellon Fund	Various	22 prints and drawings
Mrs. Harold Ober	Marin	Quai d'Ivry
	Meryon	The Old Gate of the Palace of Justice
44		The Admiralty
Mrs. Helen Haseltine Plowden	Haseltine	House in Venice
**	Haseltine	Mount Tacoma

### THE COLLECTIONS

Donor	Artist	Title
Mrs. Fred Rieth	Various	23 prints
Lessing J. Rosenwald	Claude Lorrain	Return of the Herds
46	Corot	40 prints
	Géricault	Etudes de chevaux
44	Rembrandt	The Artist Drawing from a Model
14	- m-	A Woman Reading
	15	The Goldweigher's Field
16	Various	4 prints (from proceeds of sale of duplicate prints)

## WORKS OF ART ON LOAN TO THE GALLERY

The following works of art were received on loan, or were continued on loan:

Donor	Artist	Title
Nathan Cummings	Prendergast	Cove with Figures
Coloncl and Mrs. Edgar W. Garbisch	Hicks	Peaceable Kingdom
Jerome Hill	Delacroix	Lion Devouring a Goat
Mr. and Mrs. David	Bonnard	After Lunch
Lloyd Kreeger		
	Cézanne	Road near Auvers
44	Degas	Woman Brushing Her Hair
	Gauguin	Landscape
46	Monet	The Seine near Giverny
H.	Maillol	Pomona
Mr. and Mrs. Paul Mellon	Stubbs	Lion Attacking a Deer
и,	Stubbs	Lion Attacking a Horse
	Various French artists	68 paintings
м	Various English artists	137 drawings and water- colors
s (	Prendergast	Salem Willows
R.;	Degas	13 wax sculptures
61		1 bronze sculpture

## WORKS OF ART ON LOAN RETURNED

Artist	Title
Prendergast	Cove with Figures
Hicks	Peaceable Kingdom
Bonnard	After Lunch
Cézanne	Road near Auvers
Degas	Woman Brushing Her Hair
Gauguin	Landscape
Monet	The Seine near Giverny
Maillol	Pomona
	Prendergast Hicks Bonnard Cézanne Degas Gauguin Monet

#### WORKS OF ART LENT BY THE GALLERY

#### To Akron Art Institute American Federation of Arts State of Arkansas Blair House The Brooklyn Museum Art Institute of Chicago California Palace of the Legion of Honor " Deerfield Academy Drury College Georgia Museum of Art State of Illinois 10 Joslyn Art Museum Lakeview Center for the Arts and Sciences Munson-Williams-Proctor Institute University of Maryland Mint Museum of Art \*\* .. National Art Museum of Sport, Inc. National Collection of Fine Arts National Society of Colonial Dames 60 National Portrait Gallery Norfolk Museum of Arts and Sciences Pennsylvania Academy of the Fine Arts Portland Art Museum Museum of Fine Arts, St. Petersburg, Fla. Smithsonian Institution State University College, Geneseo, New York Society of the Four Arts Tampa Bay Art Center Triton Museum of Art United States Capitol

Artist Demuth Various

Catlin Various Homer Whistler Whistler Homer

Whistler Tack Various Various Stuart Zeliff Catlin Catlin

Whistler

Cropsey

Copley

West Various Toole

Quidor

Stuart

" Various Various

John

Homer Various

Various Church

Various Various Various Lambdin

#### Title

Chimney and Water Tower 35 paintings

18 paintings 6 paintings Hound and Hunter Head of a Girl White Girl Hound and Hunter

Head of a Girl Charles Evans Hughes 4 paintings 14 paintings Sir John Dick The Barnyard 35 paintings 28 paintings

White Girl

Autumn on the Hudson River The Death of the Earl of Chatham Self-Portrait 17 paintings Skating Scene

The Return of Rip Van Winkle Betsey Hartigan

Unknown Man 13 paintings 7 paintings

#### Joseph E. Widener

Right and Left 4 paintings

5 paintings Morning in the Tropics 17 paintings 6 paintings 35 paintings Daniel Webster

To	Artist	Title
United States Capitol	Courter	Lincoln and His Son Tad
United States Department of Justice	Various	4 paintings
United States Department of State	Catlin	7 paintings
United States Supreme Court	Hesselius	Thomas Johnson
Virginia Museum of Fine Arts	Homer	Hound and Hunter
66	Whistler	Head of a Girl
The White House	Various	3 paintings
Whitney Gallery of Western Art	Catlin	72 paintings

## Other Gifts

Gifts of money and securities were made by Avalon Foundation; Mrs. Angier Biddle Duke; J. I. Foundation, Inc.; Mrs. Ailsa Mellon Bruce; H. Arthur Klein; Samuel H. Kress Foundation; Medici Society, Ltd.; The A. W. Mellon Educational and Charitable Trust; Paul Mellon; Old Dominion Foundation; Lila Acheson Wallace Fund, Inc.; and others.

## Exhibitions

The following exhibitions were held at the National Gallery of Art:

- Fifteenth- and Sixteenth-Century German Prints (continued from the previous year through 3 August 1967).
- Eighteenth-Century Drawings and Watercolors from the Collection of Rear Admiral and Mrs. H. W. Chanler (continued from the previous year through 9 October 1967).
- Gilbert Stuart, Portraitist of the Young Republic (continued from the previous year through 20 August 1967).
- French Nineteenth-Century Prints from the Rosenwald Collection (3 August through 7 December 1967).
- Fifteenth- and Sixteenth-Century European Drawings (27 August through 24 September 1967).
- Swiss Drawings: Masterpieces of Five Centuries (8 October through 29 October 1967).
- Portraits from the Graphic Arts Collection of the National Gallery of Art (25 October 1967 through 8 February 1968).
- Fifteenth-Century Engravings of Northern Europe from the Collection of the National Gallery of Art (3 December 1967 through 7 January 1968).

- The Temptation of Christ by Juan de Flandes (14 December 1967 to continue into the next fiscal year).
- Exhibition of Christmas Prints (7 December 1967 through 22 January 1968).
- Renderings from the Index of American Design (22 January through 8 April 1968).

Painting in France 1900–1967 (18 February through 17 March 1968). The Etchings of Charles Meryon (1 April through 28 April 1968). Prints by Mark Catesby (1 April through 28 April 1968).

- Paintings from the Albright-Knox Art Gallery, Buffalo, New York (19 May 1968 to continue into the next fiscal year).
- Twentieth-Century French Prints and Drawings from the Rosenwald Collection, the Chester Dale Collection, and the Frank Crowninshield Collection (8 April through 25 June 1968).
- Prints of the Danube School (25 June 1968 to continue into the next fiscal year).

#### Traveling Exhibitions

Graphic Arts from the National Gallery of Art collections were included in two traveling exhibitions, and special loans were made to 32 museums, universities, schools, and art centers in the United States and abroad.

## Curatorial Activities

Under the direction of chief curator Perry B. Cott, the curatorial department accessioned 164 gifts to the Gallery, Advice was given with respect to 1,691 works of art brought to the Gallery for expert opinion, and 50 visits to collections were made by members of the staff in connection with offers of gifts.

The registrar's office issued 130 permits to copy and 70 permits to photograph. About 4,000 inquiries, many of them requiring research, were answered orally and by letter. There were about 350 visitors to the graphic arts study room, and permits for reproduction involving 100 photographs were issued.

Material in the Index of American Design was used during the year by 471 persons. Their interests included securing slides and exhibits, doing special research and designing, and gathering illustrations for publications.

Assistant chief curator William P. Campbell served as a member of the Special Fine Arts Committee of the Department of State; he judged one exhibition.

Curator of painting H. Lester Cooke was appointed consulting editor of *American Artist* magazine; he judged two exhibitions. A combat artist in Viet Nam, he continued as art consultant for NASA, visiting



Interior of St. Peter's, Rome, by Giovanni Paolo Panini (Italian, ca. 1692– 1765/8). Canvas, 61 x 77<sup>1</sup>/<sub>2</sub> inches. Ailsa Mellon Bruce Fund.

Cape Kennedy with artists. He organized an art exhibit for NASA's tenth anniversary, and appeared on several television shows during the year.

David Rust, museum curator, judged three art exhibitions.

Assistant registrar Diane Russell taught two courses at The American University.

The Richter Archives received and cataloged 200 photographs on exchange from museums here and abroad; 1,176 photographs were purchased and about 2,000 reproductions were added to the Archives. 1,000 photographs were added to the Iconographic Index.

## Restoration

Francis Sullivan, resident restorer of the Gallery, made regular and systematic inspection of all works of art in the Gallery and on loan to government buildings in Washington, periodically removing dust and bloom as required. He relined, cleaned, and restored ten paintings; gave special treatment to sixty-eight; and X-rayed eighteen as an aid in research. He continued experiments with synthetic materials as suggested by the National Gallery Fellowship at the Mellon Institute of Industrial Research, Pittsburgh, Pennsylvania. Technical advice was given in response to 237 telephone inquiries. Special treatment was given

to works of art belonging to government agencies including the United States Capitol and the Supreme Court. Sullivan appeared on the NBC television broadcast "The American Profile—The National Gallery of Art."

## Publications

Katharine Shepard, assistant curator of graphic arts, contributed a book review to the American Journal of Archaeology. Hereward Lester Cooke wrote a book on Painting Lessons from the Great Masters, which won the Art Book of the Year award from the Art Publishers Guild. William P. Campbell edited the catalog of the Stuart exhibition. Perry B. Cott wrote the introduction to a book on Italian paintings in the National Gallery of Art.

## **Publications Service**

The Publications Service placed on sale nine new publications: Nicolas Poussin by Sir Anthony Blunt, the A. W. Mellon Lectures in the Fine Arts for 1958; Painting Lessons from the Great Masters by Hereward Lester Cooke; On Quality in Art by Jakob Rosenberg, the A. W. Mellon Lectures in the Fine Arts for 1964; Renaissance Medals from the Samuel H. Kress Collection by G. F. Hill and Graham Pollard; the second book in the National Gallery of Art's Kress Foundation Studies in the History of European Art, French Painting in the Time of Jean de Berry (two volumes) by Millard Meiss; Going Places with Children (a guidebook to Washington, D.C.); Art and the Spirit of Man by René Huyghe, Kress Professor in Residence at the National Gallery of Art; Historia Illustrada del Arte Occidental by Erwin O. Christensen; Bernini by Howard Hibbard.

Six new catalogs of special exhibitions were placed on sale; Gilbert Stuart (1755-1828), Portraitist of the Young Republic; Fifteenth- and Sixteenth-Century European Drawings; Swiss Drawings: Masterpieces of Five Centuries; Painting in France, 1900-1967; Paintings from the Albright-Knox Art Gallery; Fifteenth-Century Engravings of Northern Europe by Alan Shestack, the second volume on graphic art in the collection of the National Gallery of Art.

A second edition of the catalog listing items sold by the Publications Service was published. A catalog with black-and-white illustrations of 48 Christmas cards, using reproductions of paintings, sculptures, and prints from Gallery collections was published, and 55,000 were distributed. Over 360,000 cards were sold.

The following new color reproductions were made available during the year: twelve subjects in the  $22'' \ge 28''$  format; fourteen subjects in  $11'' \ge 14''$  letterpress format; twenty-one subjects (for the first time)

#### PUBLICATIONS-EDUCATIONAL PROGRAM

in the 11" x 14" offset-lithography format; thirty-four color postcards; and seventy 2" x 2" color slides.

Number of customers served :

Over the counter	337, 012
By mail	14, 464
Total number of customers	351,476

## Educational Program

The program of the education department was carried out under the direction of Margaret Bouton, curator of education. Attendance figures for the series of lectures, tours, and special talks continued by the department are shown below.

Type of Tour	1967	1968
Introduction to the collection	22, 126	19, 384
Tour of the Week	9, 166	9,711
Painting of the Week	13, 396	13, 836
Sunday lectures	15, 095	14, 533
Special appointments	22, 733	25, 325
Scheduled visits for area school children	74, 327	63, 674
Pre-school children	820	646
Total public response	157, 663	147, 109

Special appointments for tours, lectures, and conferences were made for groups from government agencies such as the Department of State, the Foreign Students Council, and the Armed Forces, and for club and study groups from all parts of the country.

The program of training volunteer docents continued, and volunteers from the Junior League of Washington, D.C., and the American Association of University Women conducted tours for children from public and private schools in the District of Columbia and surrounding counties of Maryland and Virginia. This year a Saturday program was inaugurated by the Junior League docents to provide tours for Scout groups and others.

The program for pre-school children, begun last year in connection with the cooperative nursery schools supervised by the District of Columbia Department of Recreation, continued; and fifteen volunteer docents (mothers who regularly help in the nursery schools) conducted tours of the Gallery for children from twenty-seven schools.

On Sunday afternoons fifty lectures with slides or films were given in the auditorium. There were thirty-five guest lecturers. Among these, the Andrew W. Mellon Lecturer in the Fine Arts, Stephen Spender, gave five lectures entitled "Imaginative Literature and Painting." Seven lectures were given by members of the staff of the education department, two by other Gallery staff members, and there were two full-length film presentations.

The slide library now has a total of 51,567 slides in its permanent and lending collections. During the year 1,893 slides were borrowed by 446 persons, and it is estimated that the slides were seen by 26,769 viewers.

Education department staff members prepared texts for thirty-nine leaflets to accompany reproductions of the Painting of the Week sold in the Publications Rooms. Thirty-six radio talks were produced for broadcast during intermission periods at the National Gallery Sunday concerts. One new LecTour tape was recorded, and an Acoustiguide text was written and recorded for the exhibition of paintings from the Albright-Knox Gallery. Five pages of text were prepared for the Spanishlanguage Acoustiguide tour.

Dr. Bouton gave five lectures over the telephone to classrooms in schools in Arlington, Virginia, and in Youngstown, Ohio. Slides of Gallery paintings had been sent to the schools. Question and answer periods followed the telephone lectures.

A calendar of events listing National Gallery activities and mailed to approximately 11,800 names each month was prepared by the education department. In January this duty was transferred to the Public Information Office.

John Brooks taught art courses for the University of Maryland. John Hand delivered three lectures for the Virginia Museum and lectured on Oriental Art at the Graduate School, Department of Agriculture. Raymond S. Stites, Assistant to the Director for educational services, delivered twenty talks outside the Gallery. These included lectures at ten universities and colleges delivered in six states.

### Extension Service

The Office of Extension Service circulates to the public traveling exhibitions, films, slides, and filmstrip lectures. These materials are lent free of charge except for shipping expenses. During the fiscal year this program reached approximately 2,176,000 persons—an increase of approximately 396,000 over last year.

Traveling exhibitions were viewed by an estimated 1,018,000. These figures include viewers of thirteen exhibits which are on loan to other organizations and are circulated by them. One hundred and forty-four prints of three films on the National Gallery of Art were circulated in 1,299 bookings and were seen by approximately 142,000 persons. This represents an increase in bookings of 576 (approximately 63,000

viewers) over last year when eighty prints of films were circulated.

A total of 2,403 slide lectures were circulated in 9,487 bookings and were seen by over 711,500 persons. This represents an increase in viewers of close to 81,500 over last year.

The special slide lecture project of placing sets of slides on long-term loan with school systems was, in this its second year, expanded and increased so that fifty additional slide sets were placed in thirty-two school systems, with nine state directors of art, and in five colleges. The total number of schools now included in this special project is fifty-six. An incomplete report from the schools (thirty-one schools reporting) shows 4,123 bookings with an estimated 309,225 viewers.

To increase the effectiveness of the Extension Service and to keep abreast of new developments in the audiovisual field, the curators, Grose Evans and George Kuebler, attended conferences and conventions in various states, speaking about the National Gallery of Art and displaying teaching materials available from the Gallery.

The National Gallery of Art again cooperated with the United States Office of Education and the George Washington University in a summer institute entitled "The Art Museum and the Teacher." Thirty-six teachers and supervisors from various parts of the country participated in this program, which was designed to strengthen their knowledge of art history and criticism and to develop new teaching techniques. The institute was held from 26 June to 11 August 1967.

#### Library

The library, under the direction of Anna M. Link, accessioned by gift, exchange, and purchase 1,723 books, pamphlets, and periodicals; processed 993 publications; filed 4,442 cards in the main catalog and shelf list; received by gift, exchange, or purchase 3,301 periodicals; charged to staff members 4,821 books; shelved 8,320 books; and borrowed through interlibrary loan facilities 569 books, of which 536 were borrowed from the Library of Congress.

Under the exchange program the library distributed 538 National Gallery of Art publications to foreign and domestic institutions and received 554 publications in exchange.

The library is the depository for black-and-white photographs of the works of art in the Gallery's collections. These are maintained for use in research by the staff, for exchange with other institutions, for reproduction in approved publications, and for sale to the public. Approximately 5,571 photographs were added to the stock in the library, and 1,323 orders for 6,046 photographs were filled, including 400 permits for reproduction of 906 subjects.

## Index of American Design

The Index of American Design circulated 32 exhibitions in 74 bookings in 15 states and the District of Columbia. The Index also circulated 154 sets of color slides (7,636 slides) throughout the country; 735 photographs of Index subjects were used for exhibits, study, and for publication. The photograph file has been increased by 42 negatives and 192 prints. The Index received 471 visitors who studied the material for research purposes and to collect material for design and publication. Twenty-one permits were issued to reproduce Index subjects (354 subjects) for publication. All these categories showed an increase by use and activity over 1967.

One special exhibition was prepared for display in the Gallery, and a selection of Index watercolors was on view in certain areas of the Gallery during the entire year.

Two exhibits from the Index were circulated by the Smithsonian Institution and one was borrowed for a year by the National Foundation on the Arts and Humanities.

## Operation and Maintenance Activities

The Gallery building, mechanical equipment, and grounds were maintained throughout the year at the established standards.

Alterations in the west wing corridor on the ground floor were completed; a large unfinished area was floored and prepared for occupancy by the Extension Service and the Index of American Design; additional general and art storage facilities were constructed; various improvements were made in the restoration studio, photographic laboratory, Constitution Avenue entrance, and greenhouse. Alterations necessary to provide more efficient facilities for the sale of publications were commenced.

The Gallery greenhouse produced flowering and foliage plants in sufficient quantities to meet all of the decorative needs of special openings, holiday periods, and the daily requirements of the garden courts.

## Pre-Recorded Tours

The Gallery radio-tour system, LecTour, and Acoustiguide, a small tape-playback device offering a 45-minute highlight tour, were used by 44,707 visitors.

#### Music

Under the supervision of Richard H. Bales, Assistant to the Director in charge of music, thirty-seven concerts were given on Sundays in the east garden court. Thirty-two of these concerts were financed by funds

#### MUSIC-RESEARCH

bequeathed to the Gallery by William Nelson Cromwell, and six of the seven programs in the twenty-fifth American Music Festival were provided by funds received from the J. I. Foundation, Inc.

The National Gallery Orchestra, conducted by Richard H. Bales, played ten of the concerts. Two programs were made possible in part by grants from the Music Performance Trust Fund of the Recording Industry. All the concerts were broadcast in their entirety by radio station WGMS. Music critics of the local newspapers continued coverage of the concerts.

The orchestra performed at special concerts, including a performance at the White House following a State dinner in honor of Chancellor of the Federal Republic of Germany and Mrs. Kiesinger, on 15 August 1967; and at the dedication of restored Ford's Theater on 21 January 1968.

Two one-hour color television concerts by the National Gallery Orchestra were telecast locally on WTOP on 28 November 1967 and 20 February 1968. The Gallery Orchestra and television station WTOP received an award from the Metropolitan Area Mass Media Commission of the American Association of University Women for these concerts.

Richard H. Bales was in residence at the University of Rochester for the summer as conductor of the Eastman Chamber Orchestra and as instructor in conducting at the Eastman School of Music. He also appeared as guest conductor of the Peninsula Symphony Orchestra in Newport News, Virginia; he lectured several times before clubs and music groups. A number of his compositions were performed during the season not only by the Gallery Orchestra but also by the Philadelphia Symphony Orchestra and by orchestras in other cities. This year marks his twenty-fifth year in charge of music activities at the Gallery, and as conductor of the National Gallery Orchestra. During this quarter century he has compiled a record of which the National Gallery of Art is justly proud.

## Research Project

Generous grants from the Old Dominion and Avalon Foundations have made possible the continued long-range program of research on artists' materials sponsored by the National Gallery of Art at Carnegie-Mellon University's Mellon Institute in Pittsburgh. One phase of the present investigations concerns a broad spectrum of studies regarding the deteriorating effects of light on museum collections. Another phase, just initiated, concerns the application of nuclear methods to the characterization of materials. The past year marked the completed development of a method that can provide an indication of the age of white lead in paintings, based on measurement of the equilibrium between the natural radioactive isotopes present in the lead, lead-210 and radium-226. In its latest development, the method permits estimation of the probability that the lead in pigment samples was refined in the twentieth century or in an earlier time. An article in *Science* describes new procedures which were devised to circumvent possible interference by impurities, and presents data demonstrating conclusively that modern white lead had been used in a number of paintings in the style of Vermeer and Hals which have generally been considered forgeries. Furthermore, data obtained regarding two questioned paintings, attributed to Vermeer, at the National Gallery of Art showed that the lead in these paintings was indeed old, thereby tending to confirm the attribution.

A new three-year project jointly financed by the Gallery and the Atomic Energy Commission will explore further applications of nuclear technology to problems in characterizing artists' materials. Chief among these will be the application of neutron activation analysis to establish concentration profiles of trace impurities in pigments used by major artists. Such data may establish what amounts to "fingerprints" of the artist, his studio, or contemporary locale which would be virtually impossible for any forger to duplicate.

To probe the various hazards of exposure to light, the Research Project has initiated studies of the rate at which certain traditional pigments may fade. Early in this investigation, special attention was given to the phenomenon of chalking, a lightening of the color of paints which may easily be mistaken for deterioration of pigment but which is caused instead by the deterioration of the vehicle. Although frequently encountered in accelerated testing, this form of deterioration can also occur in paintings on a gallery wall. Through analysis of the spectrophotometric reflectance curves of a paint before and after exposure, it has proved possible to distinguish chalking from true fading of the colorant.

Vermilion is a peculiar artists' pigment that darkens rather than fades upon exposure to light; in so doing it undergoes a physical change rather than a chemical one. In the examination of this problem, the Research Project has studied in detail the nearly forgotten writings and patents published by Alexander Eibner fifty years ago in which the causes of this transformation and directions for the preparation of lightfast pigment are presented. Laboratory experiments revealed that vermilion made according to Eibner's directions is more lightfast than many currently available varieties. The extent of conversion of the red to the black

#### OTHER ACTIVITIES

form depends upon the amount of visible and near ultraviolet radiation that strikes the sample. As a consequence, the traditional technique of placing alizarin and carmine glazes over vermilion provides protection from darkening. Moreover, in watercolor and polymer-emulsion paints that scatter the light considerably, vermilion will not darken so much as it will in oil.

Illumination may also cause damage through heat. To monitor the temperature of paintings being photographed under high-intensity illumination, infrared-sensing thermometers have been introduced which operate at a distance and need not touch the object. A published report covering both the theoretical and practical aspects of the problem describes the beneficial effects of dichroic-reflector lamps, infraredreflecting glass, and refrigerated air.

The research results have been shared widely through the publications in the attached list as well as through numerous lectures, including invited papers given in London and Siena in September 1967.

FELLER, R. L. "Barytes Found in Blanched Paint." Bulletin of the American Group-IIC, vol. 8, no. 1, p. 10, 1967.

—. "Felt-tipped Markers and the Need for Standards of Lightfastness for Artists' Colorants." Bulletin of the American Group-IIC, vol. 8, no. 1, pp. 24-26, 1967; Inter-Society Color Council Newsletter, no. 192 (January-February 1968), pp. 10-11.

—. "Control of Deteriorating Effects of Light on Museum Objects: Heating Effects of Illumination by Incandescent Lamps." Museum News, vol. 46, no. 9 (May 1968), Technical Supplement.

JOHNSTON, R. M., and R. L. FELLER. "Optics of Paint Films: Glazes and Chalking." Pages 86-95 in Application of Science in the Examination of Works of Art. Boston: Museum of Fine Arts, 1967.

KEISCH, B. "Discriminating Radioactivity Measurements of Lead: New Tool for Authentication." Curator, vol. 10, no. 1, p. 41, 1968.

—. "Dating Works of Art through Their Natural Radioactivity: Improvements and Applications." Science, vol. 160, p. 413, 1968.

## Other Activities

The National Gallery of Art provided facilities for the ceremony held by the Post Office Department on 2 November 1967—the first day of issue of a postage stamp in the Fine Arts Series. The stamp is based on the painting by Thomas Eakins, *The Biglin Brothers Racing*, which was given to the Gallery by Mr. and Mrs. Cornelius Vanderbilt Whitney.

Henry Beville, head of the photographic laboratory, and his assistants processed 234,037 items including slides, negatives, prints, color transparencies, and color slides. This is a 90 percent increase over the activity in 1967.

## Audit of Private Funds

An audit of the private funds of the Gallery will be made for the fiscal year ended 30 June 1968 by Price Waterhouse and Co., public accountants. A report of the audit will be forwarded to the Gallery.

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