

A CONTEXT-BASED APPROACH TO CONSERVING PHOTOGRAPHS ON TEXTILES

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ABSTRACT

The use of textile as a photographic support is relatively rare, and best practices for long-term care have yet to be established. Textile-based photographs incorporated into composite objects require a multi-pronged, contextually-informed conservation strategy. A recent Smithsonian project brought together experts in photograph and textile conservation, as well as conservation scientists, to examine eleven quilts bearing photographic images in the Anacostia Community Museum's Collection. The project combined curatorial and archival research with technical analysis of the photographs to enhance and fully document the artists' work and intent. Efforts focused on identifying and documenting the materials and techniques used to create textile-based photographs. The outcome of the historically informed, context-based approach ensured that conservation treatment recommendations were developed with full consideration and a sound understanding of the artists' motivations and sources of inspiration.

INTRODUCTION

In fall 2017, the Anacostia Community Museum (ACM) and the Smithsonian's Museum Conservation Institute (MCI) began a collaborative project to preserve eleven photographically-illustrated quilts dating from the 1990s and early 2000s. The group of quilts represents the work of three different artists: one quilt by Lori K. Gordon (fig. 1), two quilts by Ira Blount (fig. 2, 3), and seven quilts by Fay Pullen Fairbrother (fig. 4). Another quilt, made by a group of unknown quilt artists from the Washington, D.C. area, has a connection to a local quilting guild, the Daughters of Dorcas and Sons. In order to gain more insight on this quilt, consultations have been conducted with members of the Daughters of Dorcas and Sons (fig. 5). The group was invited to look at the ACM's quilt Collection and specific questions about photo transfer techniques, the guild history, and relationship to ACM were asked. In this vein, the first part of the project involved archival research to connect curatorial research, previous exhibits, and installation notes for all the quilts. Correspondence between the artists and the curators contextualized the artists' personal background and intent. Interviews and consultations with the quilt-artists, and close friends and colleagues, and the quilting community provided invaluable contextual information about the artists' motivations and technical approaches. The second part of the project focused on the analysis and identification of photographs on textiles, 144 in total. The photographic image materials were examined with HIROX microscopy. The photomicrographs served to catalog areas of damage and aid in identification of each printing process. Portable x-ray fluorescence spectroscopy (pXRF), and Fourier transform infrared spectroscopy (FTIR) were used to identify binder material and coatings. Conservation concerns include the need to stabilize the damaged photographic emulsion and relax the fabric supports.

1. LORI K. GORDON'S QUILT *LABAT: A CREOLE LEGACY*

Lori K. Gordon's quilt *Labat: A Creole Legacy* documents the life of Celestine Labat, a lifelong resident of the Mississippi Gulf Coast (fig. 1). Ms. Labat was born and raised in the early 1910s in Bay St. Louis, a town with a large Creole community. Her family was Catholic, of African, white, and Choctaw descent, and Ms. Labat had to fight racial discrimination to get an education. At almost 8 x 9 feet, the quilt is a monumental display that juxtaposes Ms. Labat's family photographs with blocks of text from an oral history the artist conducted with her. The photographs and text panels are printed on cloth and stitched to a rough back-cloth.

1.2 TECHNICAL ANALYSIS

We contacted the artist, Ms. Gordon, who was able to describe the technique she used to create the images on textile. First, she scanned original photographs, creating digital photographs that she manipulated with an Adobe Photoshop filter to give them a cohesive monochromatic appearance. She then printed the images with an Epson printer and ink, onto a commercially-produced Avery inkjet transfer paper. Following the manufacturer's instructions, Ms. Gordon used heat to apply the inkjet transfers onto the textile. Once the images-squares were created, she adhered them to the large-scale canvas (secondary support), and stitched their edges down with brown embroidery floss. The stitches are a design choice not a structural necessity. Despite the detailed information on her transfer technique, the prints have a variety of surface sheens as a result of what appears to be the application of a coating media. Ms. Gordon did not remember what material she used to alter the surfaces - but it seems likely to be an acrylic medium. In the Hirox images (fig. 6) the characteristic cyan, magenta, yellow, and black rosette pattern indicative of inkjet printing is visible. However, in some areas, the surface has a melted appearance, evidence of the transfer process using a hot iron.

2. IRA BLOUNT'S AUTOBIOGRAPHICAL QUILTS

Ira Blount was born and raised in Memphis, Tennessee. He studied at the Tuskegee Institute and served in the Army before moving to Washington, D.C. in 1945. Mr. Blount always had a passion for arts and crafts, and he pursued not only quilting, but also embroidery, basketry,

origami, and carving. Shortly before Mr. Blount's 100th birthday, he agreed to be interviewed at his retirement home in Washington, D.C. (fig. 7). The interview revealed that Mr. Blount developed his love of quilting in memory of his mother, a seamstress who taught him to sew. Two of Mr. Blount's quilts include a personal photograph printed on textile. The photograph on "Mem'ries of Camp Lee, VA 1942-1946" is a sepia-toned portrait of Mr. Blount in his military uniform, signed in the right corner: "To the folks from Ira". The quilt also includes his military insignia patches (from left to right: corporal, sergeant, first sergeant, and staff sergeant), and a caption cross-stitched on Aida fabric patches, along with Mr. Blount's nickname, "Stg. Shorty". The photograph on the second quilt, "Cannon Beckley, 1840-1903... and Family," is a black and white image of three generations of the maternal side of the artist's family. The quilt is made from a dark brown fabric framed with light brown mud cloth, and the title is cross-stitched onto Aida fabric patches.

2.1 TECHNICAL ANALYSIS

Mr. Blount remembered consulting with members of the Daughters of Dorcas and Sons quilting group in the early 2000s, and eventually bringing his original photographs to a print shop in the Washington, D.C. suburbs in order to have them transferred onto the fabric. Under high magnification the printed image of the sepia-toned photograph on the first quilt, *Mem'ries of Camp Lee, VA 1942-1946*, appears characteristic of inkjet on textile, however it is uncertain if the images were printed directly onto the textile or transferred to the textile using heat or solvent. Unlike the Labat quilt, the surface does not appear to be melted, though it has a slight gloss (fig. 8). To the naked eye, the image on the second quilt *Cannon Beckley, 1840-1903* has a matte surface sheen and is monochromatic. Under magnification, the printed image material appears to be a single black colorant suspended in a binding medium rather than embedded in the textile support, as seen in figure 9. Despite capturing the morphology of the image material in high magnification, we have been unable to identify a dye or pigment-based system to date.

3. FAY FAIRBROTHER'S *SHROUD SERIES*

Fay Pullen Fairbrother's artwork *The Shroud Series* includes a dollhouse and ten quilts, seven of them bearing photographic images. The subjectmatter is harrowing, as the quilts juxtapose historic photographs of early twentieth-century lynchings and gatherings of the Ku Klux Klan, with period portraits of African American and white families (figs 10, 11). The dollhouse features some of the same images reproduced in miniature picture frames hanging on the walls. Fay Fairbrother died prematurely of cancer in 1997, and her work is not widely known. Through archival research and interviews with her friends and colleagues we learned that she was a photographer, that she studied art..., and that she sourced some of her images in the archives of the Western History Collection at the University of Oklahoma. Other images are located at the Schomburg Center for Research in Black Culture in New York and the Allen/Littlefield

Collection at the Atlanta's High Museum of Art, though it is unclear whether Ms. Fairbrother used the originals, or copies for her own work.

In all, *The Shroud Series* features 50 photographs on textiles, but around half are duplicates. There are 24 unique images, including five family portraits, 11 photos with the KKK, and eight lynching photos. The identity of several of the lynching victims is known from prior research: Bennie Simmons, Thomas Shipp, Abram Smith, and Claude Neal (cite) All five of the family photographs correspond to glass plate negatives at the Western History Collection at the University of Oklahoma, and although the identities of the African-American families are still unknown, the glass plate negatives help to contextualize the sitters and photographic practice in early twentieth century Oklahoma.

3.2. TECHNICAL ANALYSIS

Ms. Fairbrother indicated in her artist's statement that she used Luminos Photo Linen to create the images on her quilts. Luminos was a commercially available photo-textile made of cotton,[1] and designed to be used in the same fashion as traditional silver gelatin photo paper. As a commercial product, we expect it would produce a consistent result. Yet Fairbrother's textile-based images show varying degrees of damage. Images on the first quilt of *The Shroud Series* display severe flaking and loss of the emulsion, abrasion, and the presence of white fibers on the surface (fig. 12). *Seen with the naked eye*, the image layer has the continuous tone characteristic of a gelatin silver print, but the image particles are readily visible even under lower magnification. Upon seeing this, we speculated that Ms. Fairbrother hand-sensitized the fabric using a liquid emulsion, such as Rockland Colloid's Liquid Light. However, pXRF on the object could not confirm the presence of any inorganic material, such as silver or another image forming metal. Eventually, FTIR analysis revealed the binder layer to be most characteristic of an acrylate polymer. After spending many hours looking at the object and photomicrographs of its image material while using references such as *The Digital Print: Identification and Preservation* (Jürgens 2009, 106-120, 200) and the Image Permanence Institute's Graphics Atlas (2019), we concluded that the images are most likely the result of an electrostatic printing process. Testing through the creation of simulacra with electrophotographic transfer has further confirmed that Ms. Fairbrother most likely used this printing method with an acrylic medium to transfer the image onto the textile (Enfield 2013, 222-243, Golden Artist Colors 2014, Laury 1992, 13-32, House 1981, 95-105 and 113-120). In contrast, images on the other six photographic quilts exhibit a different type of deterioration including circular losses that reveal the surface of the primary support, cracking, and reddish staining characteristic of redox blemishes (fig. 13, 14). Under magnification, the images appear to have a continuous tone and pXRF confirmed the presence of silver. *This appears to confirm Fairbrother's statement that she used Luminos Photo Linen to create the images – though only on these six quilts.*

4 THE ONE WASHINGTON QUILT

The images on the "One Washington Quilt" celebrate landmarks of Washington, D.C.'s eight Wards. The quilt is also decorated with campaign buttons, pins and banners, and quilted with the D.C. flag. It was assembled in 1998 at the Anacostia Community Museum, during a workshop led

by the Daughters of Dorcas and Sons quilting group. Workshop participants provided the different appliques.

4. 1 TECHNICAL ANALYSIS

Museum photographer Harold Dorwin photographed the DC landmarks, and his original slides are in the ACM's archives. However, it is unclear how the images were transferred to textile. They have a matte surface sheen, and display a distinct linear pattern when viewed under magnification (Fig 15). This is likely a characteristic of the printing process, but it is difficult to identify the morphology of the image material. The process used may be one of the following: a photo-emulsion silkscreen or an early color laser or inkjet print (Gascione 2004, 79e). Some abrasion is evident on one of the image squares and further analysis will be necessary.

5. CONCLUSIONS

The eleven quilts incorporate many layers of meanings, values, and relationships. The archival research accompanied with interviews and consultations ensured

Further analysis will include the preparation of simulacra made from of plain weave, mercerized cotton simulating different printing techniques. This process will help determine viable treatment and storage options for photo prints on textile.

ACKNOWLEDGEMENTS

The conservation and presentation of the research was possible thanks to the Barbara Coffey Quilt Endowment through the Smithsonian National Collections Program and the AIC Textile Specialty Group Scholarship.

A special thanks to Grant Czubinski, Baasil Wilder, Jennifer Morris, and Jennifer Sieck.

NOTES

[1] Extensive research in online photography forums indicated the Luminos Photo Corporation went out of business in 2005.

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Annaick Parker is a textile conservator who currently works at the Smithsonian Anacostia Community Museum (ACM) as a collection's specialist focusing on photographically illustrated quilts and a rehousing project. From 2015-2017 she was an Andrew W. Mellon Fellow at the Smithsonian Institution's National Museum of the American Indian (NMAI). Before her fellowship Annaick worked as an associate conservator at the German Leather Museum, Offenbach from 2014-2015. Annaick trained in Germany at the University of Technology Arts and Sciences (TH) in Cologne, Germany.

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Miriam Doutriaux is the Collections Manager at the Smithsonian Anacostia Community Museum, where she oversees the preservation, documentation, and housing of a diverse collection related to urban and community life. She is interested in the ways material culture connects with identity, and is leading a project to weave aspects of community into the museum's collection records. She holds a PhD in anthropology from the University of California-Berkeley

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Gwénaëlle Kavich, Conservation Scientist at the Smithsonian Museum Conservation Institute, earned a BSc in Chemistry from The Nottingham Trent University (U.K.) and a PhD in Chemical Sciences from the University of Pisa (Italy). She contributes to a wide range of technical studies of the Smithsonian museum collections using multi-analytical approaches. Previously, she has worked at the Institute for the Preservation of Cultural Heritage, the Art

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Thomas Lam has a Ph.D. in Ceramics from Alfred University. After his PhD, Thomas completed a postdoc at the National Institute of Standards and Technology (NIST). Thomas is a Physical Scientist at the Smithsonian Museum Conservation Institute (MCI), where he applies his knowledge of material science and characterization skills (scanning electron microscopy electron dispersive spectroscopy (SEM-EDS), cathodoluminescence (CL), X-ray fluorescence (XRF), or microfade testing (MFT) to contribute to the MCI technical studies team.

LIST OF FIGURES

Fig. 1 *Labat: A Creole Legacy* (2004.0001.0001) by Lori K. Gordon is based on the oral history Ms. Gordon gathered from Celestine Labat.

Fig.2 *Cannon Beckley, 1840-1903 ...and Family* (2002.0004.0139) by Ira Blount depicts Mr. Blount's maternal family

Fig. 3 *Mem'ries of Camp Lee, VA 1942-1946* (2002.0004.0138) by Ira Blount depicts Mr. Blount in his uniform during his time in the army

Fig. 4 This quilt of the *The Shroud Series* (2002.0011.0006) by Fay Fairbrother depicts images of lynching's alongside with family portraits and gatherings of the Ku Klux Klan

Fig. 5 Members of the Daughters of Dorcas quilting group during a consultation at the Anacostia Community Museum

Fig.6 This Hirox micrograph (250x) of the quilt 2004.0001.0001 by Lori K. Gordon is showing the characteristic cyan, magenta, yellow, and black rosette pattern indicative of inkjet printing

Fig. 7 Mr. Ira Blount pointing out his family members on photographs incorporated into quilts during his interview at his retirement home in Washington, D.C.

Fig. 8 This Hirox micrograph (200x) of Ira Blount's quilt 2011.0004.00138 is showing the characteristics of inkjet printing with a glossy surface.

Fig.9 This Hirox micrograph (1000x) Ira Blount's quilt 2011.0004.00139 is showing the matte surface sheen. A single black colorant is visible, and the image material appears suspended in a binding media rather than embedded in textile support

Fig. 10 Portrait of unidentified African-American couple with child. Robert E. Cunningham 351 Western History Collections, University of Oklahoma Libraries 5x7" copy print off glass plate negative

Fig. 11 Portrait of unidentified African-American woman and child. Robert E. Cunningham 347 Western History Collections, University of Oklahoma Libraries 5x7" copy print off glass plate negative

Fig. 12 The photomicrograph (35x) of quilt 2002.0011.0001 in Fay Fairbrother's quilts series exhibits severe damage, including flaking abrasion, emulsion loss, and the presence of white fibers on the surface

Fig. 13 The photomicrograph (150x) of quilt 2002.0011.0006 exhibits severe damage, including flaking abrasion, emulsion loss, and the presence of white fibers on the surface. It has the surface appearance of a liquid emulsion, such as liquid light

Fig. 14 The photomicrograph (35x) of quilt 2002.0011.0007 shows reddish staining characteristic of the photo gelatin process.

Fig. 15 The photomicrograph (150x) of this quilt shows a matte surface sheen overall and a distinct linear pattern, which is most likely a characteristic of the printing process