CONTENTS

PREFACE
i-vi

PANEL DISCUSSIONS

ANOTHER PERSPECTIVE:
VOICES FROM OUTSIDE TEXTILE CONSERVATION
STEPHANIE HORNBECK, NANCY POLLAK,
NANCIE RAVENEL AND KATHY FRANCIS
1-7

PANEL DISCUSSION: WHY WE DO WHAT WE DO:
ETHICS AND DECISION-MAKING
MODERATORS: PATRICIA EWER AND FRANCES LENNARD
PANELISTS: JULIA BRENNAN, CHRISTINE GIUNTINI, SUSAN HEALD
AND MARY WESTERMAN BULGARELLA
PARTICIPANTS: NICOLE BLOOMFIELD AND BETH SZUHAY
8-16

PAPERS PRESENTED

THE OBSERVER EFFECT IN CONSERVATION:
CHANGES IN PERCEPTION AND TREATMENT OF A MAN’S SILK SUIT C. 1745
LAURA MINA
17-29

A VERSATILE MANNEQUIN DESIGN
GWEN SPICER
30-41

USES OF THE FIBER REFERENCE IMAGE LIBRARY
KATHRYN A. JAKES
42-52

ONLINE ACCESS TO AND PRESERVATION OF A
MULTI-COMPONENT SKETCH COLLECTION
MARJORIE JONAS
53-67
CONTENTS

PAPERS PRESENTED

RETAINING THE UNKNOWN:
ETHICAL CONSIDERATIONS AND TREATMENT OF A
SOUTH AFRICAN BEADED TEXTILE
SARAH J. G. OWENS
68-80

POSTER SESSION

CONSERVATION OF A SAFAVID PERSIAN CARPET FRAGMENT:
TWO DIFFERENT APPROACHES TO TREATMENT IN 1980 AND 2012
KISOOK SUH
81-85
PREFACE


TSG POSTPRINTS is a non-juried publication. Submission of these papers to juried publications, such as the Journal of the American Institute for Conservation, is encouraged. The papers, chosen from abstracts submitted to the Meeting Chair, Susan Anne Mathisen, Textile Specialty Group Vice Chair for 2010-2011, are published as submitted by the authors. Editing of papers was done according to the Journal of American Institute of Conservation’s Guidelines for Authors and AIC’s Best Practices Guidelines for Print and Electronic Publications. Materials and methods presented within the papers should not be considered official statements of either the Textile Specialty Group or of the American Institute for Conservation of Historic & Artistic Works.

The Editors wish to thank the contributors to this publication for their cooperation and timeliness. Without their enthusiasm and hard work this publication would not have been possible. Special thanks are extended to Translation Services USA, LLC, for translating the abstracts into Spanish. Thanks also are due to Amanda Holden, who laid out the volume using Adobe InDesign.
ANOTHER PERSPECTIVE: VOICES FROM OUTSIDE TEXTILE CONSERVATION

STEPHANIE HORNBECK, NANCY POLLAK, NANCIE RAVENEL, KATHY FRANCIS

ABSTRACT—In this panel discussion three conservators explore some of the factors that influence the treatment of textiles and objects that have textiles as a major component. Each participant has a different practice—one is a generalist objects conservator working with diverse collections; another specializes in the conservation of paintings and painted textiles; a third is an objects conservator with specialties in ethnographic and contemporary art. Different object needs, institutional goals, and individual approaches must be identified and balanced. Various situations present diverse challenges. For museums that display groups of similar items or with open storage displays, it may be desirable to present artifacts in similar condition, and so treating objects to a similar degree may be a goal. Smaller institutions utilize volunteers and consultants in partnership with staff to accomplish projects. Conservators develop new skills by continually collaborating with experts in other specialties, by hiring temporary specialists to work on site, and by taking courses. For composite material objects, collaborations balance the object’s conservation needs with practical concerns. The panel also addressed how specialty and philosophy affect treatment choices. For example, with a painted canvas, the object may be identified as a painting or as a painted textile and the treatment is likely to vary accordingly. The category of ethnographic art/artifact includes a wide array of object types and textiles and sometimes requires a hybrid conservation approach, combining aspects of object and textile conservation.

1. INTRODUCTION

With all conservation treatments conservators make decisions about how artifacts will be treated, exhibited and interpreted. Although not often formally documented (as is routine for treatment methods and materials) the perceptions, personal approach and goals of the conservator and others responsible for treatment decisions are important aspects of treatment outcome. In addition, owner circumstances and preferences, and connoisseurship issues (Orlofsky 1993) are important factors. The goal of this panel is to explore some of these issues.

2. CONSERVATORS WORKING WITH DIVERSE COLLECTIONS by N. Ravenel
Generalist conservators working in smaller institutions are sometimes called upon to perform textile conservation treatments on works of art and artifacts that are made of composite materials as well as objects that may be entirely textile based. To care for the bedcover, floor cover, and sampler collections, Shelburne Museum engaged grant-funded specialist conservators for 12 to 18 month projects to survey the condition of the collections as well as to perform treatment as necessary. The surveys serve not only as a roadmap for managing the collections and prioritizing treatment, they also help deepen staff conservators’ knowledge of the artifacts and works of art in their care. By hosting grant-funded textile conservators in Shelburne’s lab, staff gain a deeper appreciation of the specialist’s point of view when it comes to treating textiles and learn more about resources and requisite methods, tools and materials required to treat the collection.

Volunteers also work with the consulting conservators, assisting with rehousing and mounting projects. This helps the staff conservator after the term of the funding is over since she can call on these volunteers to continue that work as the collections grow and develop. However, in the absence of a specialist conservator, the volunteers are not asked to undertake tasks they had performed under the textile conservator’s supervision that are not in the staff conservator’s repertoire.

As much as possible, curators pick artifacts that are stable enough to withstand exhibition. Shelburne Museum has a long-standing tradition of open storage display, and this does have an impact on how the collections are treated. Apparent condition needs to be even across the collections. Quilts and rug collections are rotated for exhibition and such rotations are facilitated by the use of the collections management database. Because any object may go on view next to any other object on display, the aesthetic appearance of the collection needs to be harmonious. Restoration work needs to be undertaken with an eye towards the visual appearance of the rest of the collection. There is also a somewhat standardized approach to mounts, though allowances are made for condition and design issues. For instance, the curatorial and exhibition designer’s preference is to display quilts vertically, hanging from hook-and-loop (e.g., Velcro) mounts (fig. 1). However, when the condition, fabrication method, or size of a quilt does not allow for that manner of exhibition, quilts may be displayed on a slant, horizontally on a table or bed, or on modified versions of the wave form mount, designed by Deidre Windsor and Joe Godla (fig. 2) (Windsor 2004).

Figure 1 (left): In a gallery showing a rotating selection from the collection, quilts at Shelburne Museum are displayed in moving cases in a manner similar to that used by the museum’s founder. In the adjacent gallery, crazy quilts displayed in 2010 were shown on slant boards. (Image courtesy Shelburne Museum). Figure 2 (right): Shelburne Museum quilts and quilt tops displayed on a variation of the wave mount, designed by Windsor and Godla. (Image courtesy Shelburne Museum)
The conservation needs of the museum related to the exhibition schedule help inform the staff conservator as to where she needs to develop professionally. While sometimes particular subjects addressed through workshops will help the conservator address particular needs within a collection, at other times skills are developed just to the point that she can undertake a specific treatment on a particular object. This was the case for the conservation treatment of a suite of seating furniture designed by Louis Comfort Tiffany and Samuel Coleman (Ravenel 2009). In this case consulting textile conservators examined the upholstery to determine whether remnants of original upholstery materials were present and suggested courses of treatment. Then, under the tutelage of a textile conservator experienced in minimally invasive conservation techniques, the Shelburne Museum conservator identified a restoration show cover fabric that was agreeable to the curators, de-upholstered the suite of furniture, and executed the restoration.

3. PAINTINGS AND PAINTED TEXTILES by N. Pollak

From the perspective of a painting conservator, the term ‘textile’ often refers to objects rendered in paint as part of the image. We may discuss the artist’s accomplishments in creating a delicately transparent lace shawl, or their brushwork which makes a child’s rough dress out of a few bold strokes. However, when discussing textiles that are part of the structure of paintings, different vocabulary, along with different objectives, are brought into play. The ‘textile’ is now canvas, and its primary function is to act as the support for the paint and preparatory ground layers used in the execution of the painting. While some textile qualities of the canvas, such as weave texture, may be of interest, the primary thrust of painting conservation is in maintaining the integrity of the paint layer which is upon the canvas. Other textile qualities such as drape and flexibility are usually seen by painting conservators as problems to be addressed because they are often detrimental to the paint layer. Thus, auxiliary stretcher supports and their expansion mechanisms are employed in the task of keeping these ‘painted textiles’ flat and taut. When necessary, treatment to maintain planarity may include lining to another canvas or to a solid support. While paintings conservators do make every effort to undertake treatments that preserve the qualities and feel of a painted canvas, our main objective, and the perspective we bring to an object, is focused on the paint layer as the driving force, or master of the situation.

When that situation is reversed, and a textile artifact has painted embellishment, the same materials and even the same painting techniques may be employed, but to a different end, in which the textile becomes master. Textile qualities such as drape and flexibility may assume importance over the planarity of the paint layer. Conditions such as cracked paint, where a brittle paint layer has relieved its stress from flexing, can be accepted and perhaps embraced.

For the painting conservator, this requires a shift in perspective from a paint-driven evaluation to one in which the paint is but one part of the total object. At times this may be particularly challenging when the painted parts of the textile are more well-preserved than the unpainted fabric. Although the painted fabric can be appreciated alone as an image, taking it out of the context of its surrounding unpainted textile can skew its overall importance. Preserving damaged fabric or recreating lost fabric is therefore important in treating and understanding the object as a whole.

Perspective of the object as beautiful image must also be balanced with that of object in use. And so while a painting conservator may strive to return a traditional easel painting to a high degree of finish through inpainting, compensating damages in a painted textile may require less inpainting, so that balance is preserved for the whole object. The challenge is to improve the readability of the image while retaining evidence of use.
ANOTHER PERSPECTIVE: VOICES FROM OUTSIDE TEXTILE CONSERVATION

and age. While doing this, we must also be conscious that we are not implying a false or arbitrary pattern of age by our selective inpainting of losses and damages.

The question to be asked is this: Which aspect of the object is master, and which is servant, and what is the proper direction for treatment? In the case of a painting on canvas, the image created by the paint layer is master, and will lead the conservation discussion, but in painted textiles, it may be that the fabric itself, and its qualities, are most important, and will lead the treatment. In the end, it is the multidisciplinary object that should become the master, leading the direction of those tasked with its care, and sometimes asking them to shift from their inherent perspectives to see things in a different light.

4. ETHNOGRAPHIC ART AND ARTIFACTS by S. Hornbeck

The category of ethnographic art/artifact includes a wide array of object types and textiles. Among these are objects that include single or multiple materials still defined as “objects” and flat textiles and costumes that are strictly speaking “textiles”. Between the two disciplines is a whole continuum of composite material artifacts. For these, the substrate typically defines the category type as “object” or “textile.” Nevertheless, the boundaries are somewhat fluid for these objects. The specialization of ethnographic conservation involves collaboration with professionals in other specializations and allied professions; a philosophy of treatment that differs from other areas of conservation; and some exhibition choices which are particular to ethnographic objects.

While the term “ethnographic” with its 19th century origin in the field of anthropology and its evocation of Colonial connotations is imperfect, for now it is the term that describes a specific, albeit broad, collection category. Ethnographic conservation describes the care of anthropological art and artifacts, which often, although not exclusively, originate in non-European cultures. Often these objects are comprised primarily of organic materials. Frequently these artifacts have a utilitarian/functional aspect to them. In this regard, ethnographic and decorative arts are similar. Anthropological artifacts often are comprised of composite media, which may include ephemeral or re-purposed materials. In this respect, such objects share similarities with some contemporary art. Indeed, depending on the context, the artifact could transcend categories.

One of the distinguishing aspects of ethnographic artifacts is the wide variety of materials—natural and synthetic, organic and inorganic—used in their fabrication (fig. 3). When the conservation of composite material artifacts is involved, collaboration between object and textile conservators is common. The collaboration can involve both conservators working on their respective areas on an artifact, or either an object or textile conservator undertaking the work, sometimes after consulting the other expert. If you work for an institution with a small conservation staff or work in private practice, these consultations sometimes happen at a distance via email or telephone.
Collaboration with colleagues in related fields is very common with ethnographic artifacts and it is one area I have found very rewarding. While at the National Museum of African Art, sometimes we needed precise material identifications for artifacts that were going to be published or exhibited. Experts at the National Museum of Natural History, specializing in entomology, mammalogy, and ornithology assisted with the identification of materials from time to time.

In terms of conservation approaches, the conservation of ethnographic materials typically involves a more conservative approach, which favors minimal intervention. Wear and evidence of use are valued aspects of an object’s history, even if they are sometimes synonymous with damage to the artifact. Indigenous repairs (also known as “native” or “ethnographic” repairs) are usually retained. The conservator, in consultation with cultural experts such as curators or sometimes anthropologists, determines the degree of treatment needed. Some works are intended to have a pristine appearance, such as an Algerian man’s wedding tunic. While for others their history of use may be a source of pride, as is the case with a Yoruba egungun costume, which had been danced in numerous ceremonies. Several important practical variables also impact treatment decisions, including exhibition display and travel on loan, perhaps with multiple venues.

While an object conservator at the National Museum of African Art, which did not have a textile conservator, my conservation colleagues and I were sometimes faced with textiles that needed treatment. For us, such treatment decisions involved first determining whether a textile conservator was needed. Extent of damage, type of damage, and complexity of treatment guided our decisions. Badly damaged, complicated treatments and any wet cleaning required contracting a textile conservator. In general, our work focused on removal of non-indigenous surface dust, local humidification to flatten wrinkles, and addressing structural issues, such as losses, torn seams, tears, or breakage of plant fiber elements.

The exhibition display of ethnographic textiles and costumes is sometimes approached differently than for other textiles. Choices may range from flat display to display on posed mannequins (figs. 3 and 4). An important aspect of the exhibition of ethnographic artifacts involves consideration of the original cultural context of the artifact. In the first part of the 20th century, elaborate diorama narrative scenes involving mannequins were a
typical display choice for ethnographic textiles. In recent years, anthropological diorama displays have come
to be viewed as subjective oversimplifications, which promote stereotyping. Consequently, museums with
anthropological collections have struggled with issues of how to represent indigenous people and living cultures
in museum exhibits. Today, the textiles or costumes are displayed with minimal narrative invention and context
is conveyed through historical photographs, film clips, and exhibition literature.

Preserving the cultural and historical context of ethnographic objects and textiles via the material conservation
of them is a paramount consideration. It informs their treatment, display, and sometimes their storage conditions
and placement. Thus, for conservators who care for these materials, it is important to be informed about, and
respectful of, the cultural history of the artifact. Successful conservation treatments of ethnographic artifacts
depend upon it.

REFERENCES

Cortes, Emilia and Suzanne Thomassen-Krauss (eds). Recovering the Past: The Conservation of Archaeological
and Ethnographic Textiles, North American Textile Conservation Conference, 5th Biennial Meeting, Mexico
City, Mexico, 9-11 November 2005.

Orlofsky, P., and D. L. Trupin. 1993. The role of connoisseurship in determining the textile conservator’s


Windsor, D. 2004. Catch the wave: A flexible new option for quilt display. Textile specialty group postprints,

AUTHOR BIOGRAPHIES

Stephanie Hornbeck is Principal at Caryatid Conservation Services, Inc., a private practice in object
conservation in Miami, FL. From 1998-2009, Stephanie was an object conservator at the Smithsonian
Institution’s National Museum of African Art in Washington, DC. She received her B.A. in art history
from Wellesley College and her diploma in fine art conservation (objects) and M.A. in art history from the
Conservation Center of the Institute of Fine Arts at New York University. Email: shornbeck@caryatid-
conservation.com

Nancy Pollak graduated from the University of Delaware/Winterthur Museum program in Art Conservation in
1991. She established Art Care Associates, her private practice specializing in the conservation of paintings and
painted textiles, in Frederick, Maryland, in 1997. Contact: Nancy R Pollak Art Care Associates, Post Office Box
4141, Frederick MD, 21705. 301-845-1010. Email: nrpollak@aol.com

Nancie Ravenel graduated from University of Delaware/Winterthur Museum Program in Art Conservation
Cleveland Museum of Art, she began work as an objects conservator at Shelburne Museum in 1998. Email:
NRAVENEL@shelburnemuseum.org
STEPHANIE HORNBECK, NANCY POLLAK, NANCIE RAVENEL, KATHY FRANCIS

Kathy Francis (panel moderator) is owner and conservator at Francis Textile Conservation LLC in Summit, NJ. Email: KFrancis@francistextile.com
PANEL DISCUSSION: WHY WE DO WHAT WE DO: ETHICS AND DECISION-MAKING

MODERATORS: PATRICIA EWER, FRANCES LENNARD
PANELISTS: JULIA BRENNAN, CHRISTINE GIUNTINI, SUSAN HEALD,
MARY WESTERMAN BULGARELLA
PARTICIPANTS: NICOLE BLOOMFIELD, BETH SZUHAY

ABSTRACT - The moderators’ recently released publication, Textile Conservation: Advances in Practice (Lennard & Ewer 2010), focuses on four major factors which have influenced development in textile conservation practice since the 1980s and which are all integral to effective conservation decision-making: the changing context, an evolution in the way conservators think about objects, the greater involvement of stakeholders, and technical developments. The panel used several case studies from this new publication as a starting point to examine why a particular course of action is chosen over another, and the ethical considerations behind those choices. There was a short but lively discussion between the panelists, other authors and Textile Specialty Group meeting participants.

DEBATE: POR QUÉ HACEMOS LO QUE HACEMOS: ÉTICA Y TOMA DE DECISIONES: RESUMEN – Los moderadores recientemente publicaron: “Textile Conservation: Advances in Practice” (Lennard & Ewer 2010), que se concentra en cuatro aspectos principales que han influido en el desarrollo de la práctica de la restauración textil desde 1980 y que forman parte integrante de una toma de decisiones efectiva con respecto a la restauración: el contexto cambiante, una evolución en la forma de pensar del restaurador acerca de los objetos, mayor participación de las partes interesadas y desarrollos técnicos. El panel utilizó diversos estudios de caso de esta nueva publicación como punto de partida para analizar por qué elegir una estrategia y no otra, y las cuestiones éticas detrás de dichas elecciones. Hubo una breve pero enérgica discusión entre los panelistas, otros autores y participantes del Grupo Especializado en Tejidos.

1. INTRODUCTION

In keeping with the AIC 39th Annual Meeting theme Ethos, Logos, Pathos, this panel was developed to review the subject of ethics and critical decision making, basing discussion around several case studies in the recent publication, Textile Conservation: Advances in Practice (Lennard & Ewer 2010). The book highlights four major factors which have influenced the development of the field of textile conservation since the 1980s: the changing context, an evolution in the way conservators think about objects, the greater involvement of stakeholders, and technical developments. The whole concept of conservation has expanded over this period (Brooks and Eastop 2011, xiii); whereas the preservation of the object itself used to be considered paramount, today’s conservators are influenced by a far wider range of considerations. Conservation today is seen as a social process as well as a technical process, demonstrated by developments in the professional codes of ethics. This was underlined by Barbara Appelbaum’s presentation to the general session where she argued that conservation is as much about people as it is about technology.

A consideration of ethics and decision-making is interwoven into the day to day work and the subsequent writings of the authors of the case studies featured in the book. Of the original forty-three authors in the book, four panelists and two participants came forward to discuss their contributions with updates for the AIC TSG Specialty Group Meeting held in Philadelphia.

2. WHY WE DO WHAT WE DO

The panelists were Julia M. Brennan, Christine Giuntini, Susan Heald, and Mary Westerman Bulgarella, all
MODERATORS: PATRICIA EWER, FRANCES LENNARD
PANELISTS: JULIA BRENNAN, CHRISTINE GIUNTINI, SUSAN HEALD,
MARY WESTERMAN BULGARELLA
PARTICIPANTS: NICOLE BLOOMFIELD, BETH SZUHAY

authors of case studies. Other contributors included Beth Szuhay and Nicole Bloomfield (representing Catherine McLean and Susan Schmalz).

Figure 1: Julia Brennan instructing how to use Stabiltex to support and repair a 19th century Malagasy lamba, for a national exhibition. Antananarivo, Madagascar, 2004. Image by Sarah Fee.

2.1 PANELISTS’ COMMENTS

2.1.1 Ethical considerations in teaching textile and preventive conservation in Asia and Africa, by Julia Brennan, Textile Conservation Services, Textile Conservator

Julia Brennan expanded upon her case study Teaching preventive conservation and textile treatments in Asia and Africa and highlighted the ethical considerations. Ethics in her approach acknowledge sensitivity, understanding, awareness of another set of values, culture, and needs; she implements conservation work within these parameters. She feels she “must adjust her preconceptions to create a working and sustainable partnership, that is carried forward and sustained by trust and respect” with her stakeholders; thus, sometimes ‘compromising’ or creating ‘ethical deviations’ from the AIC Code of Ethics to accommodate the needs of the chief stakeholders.

Brennan sees herself as an ambassador from the United States as well as an ambassador of our conservation community; she considers the way she is “perceived, accepted, integrated into the existing museum or work environment is paramount to the role she plays representing our field at large.”

Brennan ended her contribution with comments about personal and professional ethical behavior within the local culture:

• Not profiting from a secondary client while concurrently contracted to a main client in that community or country, i.e. private work for a wealthy client while on contract with the US government or national ministry of
PANEL DISCUSSION: WHY WE DO WHAT WE DO: ETHICS AND DECISION-MAKING

culture.

• Not breaching unwritten agreements of confidentiality. So much is unstated, unwritten, but agreed and understood by a sensitivity to the culture and project. Breaching this trust, and personally profiting from a project or going outside to a journalist to do an independent story, for example, can be a breach of confidentiality.

• Knowing the antiquities’ laws and movable cultural property acts in the country she is working in. This informs her of what is considered a relic or antique, and the associated laws and ramifications for breaking those laws. Informing trainees of these laws, so that they too are informed of the legal framework for protecting their own cultural property.

• Not working on ‘stolen’ or ‘questionable’ artifacts or property.

• Not buying antiques (often national laws state any object over 100 years old) and taking them out of the country.

• Purchasing local textiles or artifacts that are identified by local museums or institutions, and donating them to that institution, so that they remain in the country.

2.1.2 Partnership in the preservation of tangible and intangible cultural heritage at the National Museum of the American Indian by Susan Heald, National Museum of the American Indian (NMAI), Textile Conservator

Susan Heald described how the Native Americans are stakeholders in the preservation of their tangible and intangible cultural heritage and detailed what guides the ethics of conservators at NMAI. Heald listed the national and international initiatives:

• UNESCO 2003 Convention for safeguarding Intangible Cultural Heritage
• United States Legislation:
  • 1978 The American Indian Religious Freedom Act (AIRFA)
  • 1989 National Museum of the American Indian Act (NMAI)
  • 1990 Native American Graves Protection and Repatriation Act (NAGPRA)

NMAI’s mission statement describes how the museum works in partnership with Native Peoples and supports the continuance of the culture in contemporary Native life, while the collections policy states that the holdings are to be viewed as a living collection tied to existing cultures. The museum sees itself as a custodian not the owner of the collections; both tangible and intangible aspects are considered in the policy, and preservation is carried out in consultation and collaboration with the Native American community.

Heald compared the Canadian Conservation Institute’s (CCI) 1986 symposium on the Care and Preservation of Ethnographic Materials where few Native Americans were in attendance, with the CCI 2007 symposium Preserving Aboriginal Heritage: Technical and Traditional Approaches which was planned with many aboriginal members, many of whom were museum professionals.

The 1994 AIC code notes the necessity of having an informed respect and respect for use. The 2004 ICOM code in reference to acquisition, collection care and display states that conservators must take into account not only the professional standards but also the interests and beliefs of a community. She concluded: “Working in partnership” and “supporting the continuance of culture” have been the most rewarding aspects of our work over the past 20 years.

2.1.3 Ethnographic garments: evolution of exhibition display in response to curatorial interpretation by Christine Giuntini, The Metropolitan Museum of Art, Textile Conservator

Christine Giuntini presented a synopsis of her case study and recounted how collaborations with her colleagues at the Metropolitan Museum of Art guide her decision-making, thus affecting the way she works.

Giuntini described the changes in display methodology at the Metropolitan Museum of Art from the 1970s to the present. Earlier exhibition design for the ethnographic costume material in the fine art museum displayed the objects mounted flat on the wall not unlike fine art. Today’s methods are more in keeping with the context of the culture being represented, relating to Susan Heald’s comments.

Giuntini stated that she has “tried to balance the often competing needs of textile conservation/preservation and the desire of curators and other stakeholders to feature such textiles in a particular context. That context has evolved over the decades and it always varies from curator to curator”. Availability of materials has had an effect on decisions and practices for display methods too. She concluded by stating that “developing the best possible passive mounts for display has become a major part of many conservators’ preservation protocols”.

2.1.4 The conservation and replication of the banner covered ceiling in the Stibbert Museum, Florence, Italy by Mary Westerman Bulgarella, Freelance Textile Conservator

Mary Westerman Bulgarella recapped her case study and emphasized the importance of team work and collaboration among all of those involved in the decision making process when working in a public institution. Her project at the Stibbert Museum involved removing 13 silk banners, each representing one of the contrade of Siena, which were draped like a pagoda on the ceiling of one of the rooms. Due to their fragility it was determined that they could not go back on display and it was decided to replace them with replicas. This posed a series of ethical and aesthetic obstacles since there has been a resistance to accepting a copy to replace an original in a historic museum context and, for the most part, past methods used to reproduce historic textiles have proven unsatisfactory.

The collaboration guided the decision making throughout the long process and in the end, thanks to technological advancements in the field of digital imagery and photographic printing on fabrics, an extremely successful solution was arrived at. Each banner was digitally photographed and, after computer manipulation, its image was printed on a suitable seamless fabric and remounted on the ceiling. The original banners have returned to Siena where they are on display in individual state-of-the-art cases and they can be appreciated for their historic and artistic value.

2.1.5 The preparation of condition reports for costume and textiles at the Los Angeles County Museum of Art (LACMA) by Catherine McLean and Susan R. Schmalz, Textile Conservators, updated handout presented by Nicole Bloomfield, LACMA Mellon Fellow.
PANEL DISCUSSION: WHY WE DO WHAT WE DO: ETHICS AND DECISION-MAKING

Written condition reports are a basic component of conservation and collections management. Increasingly, conservators are asked to write reports for objects that will not receive extensive treatment, such as reports for loans and exhibitions. LACMA textile conservators have reduced condition reports to a bullet point style of writing highlighting the damage on an object. Since the case study was written there have been further developments in creating image-based reports and LACMA has been experimenting with abandoning written reports completely. The replacement is an ‘image based workflow’ or ‘examination mapping’, where the photo takes precedence over written format. Yosi Pozeilov, Senior Conservation Photographer at LACMA, spearheaded and developed this new form of reporting (Pozeilov 2011, 11-13).

A base image of the artwork is imported into the iPad, and then manipulated with a free app called *Art Studio*. Layers of information can be added, helping to measure damage over time. This development minimizes the amount of time spent on condition reporting, freeing conservators for treatment. Although there are the usual caveats concerning data storage and compatibility inherent in using any new technology, this system has many advantages: an iPad can go on the road with the courier or conservator to track damage easily and concisely. The technology is intuitive and relatively easy to use and images and text are combined into one document. Pictures are a universal language which makes international communication easier.

Work is still needed to ensure a consistent and efficient image-based report and a standard format and vocabulary should be considered. It is also the case that lawyers and insurance personnel prefer a written report with accompanying images. Would that change if more institutions adopted image-based reporting and the technology improved? What are the ethics of using an image based report? Is it more ethical to simplify condition report writing in order to treat more objects? What is the true purpose of a condition report? Ideally it should capture the health of an object at a specific period in time – image based reports certainly fulfill that function if done thoroughly. This style of reporting has great potential to free conservators from being weighed down by paperwork.

![Figure 2: iPad condition report side A. Image by Nicole Bloomfield](image-url)
3. DISCUSSION

The general discussion from the floor developed these themes and considered how they applied to work closer to home. The basic precepts that many agreed upon were:

- Context is paramount in decision making
- We need to consider stakeholders’ values – they own the collections, not the conservators. Conservation decision-making may need to prioritize the preservation of the culture and the community over the needs of individual objects. An understanding of available resources is also essential.
- Collaboration is essential
- Conservators must be flexible in their approach

A related discussion considered consulting to under resourced institutions and/or communities. Comments included:

- There are many small museums throughout the United States. Many have no professional staff and are run by volunteers. “What are the ethics of working with these museums?”
- In the past conservators were accused of dictating and being less than sympathetic to certain constituencies, indeed “being very negative and unhelpful”.
- One suggestion was that we volunteer more to help those with limited resources.
- Not only small organizations but many large institutions don’t have staff conservators; others are downsizing and conservators are losing their jobs. “We also have to make a living.” Working for free isn’t an option.”

Beth Szuhay, (co-author with Sarah Gates of the case study A Volunteer Tradition: The Evolving Role of Volunteers in Textile Conservation at the Fine Arts Museums of San Francisco), remarked that “part of the frustration we have felt at the Fine Arts Museums of San Francisco, is that having grown from a volunteer tradition, when the administration looked for things to cut in our budget, it was usually funding for professional conservation, asking- can’t you use your volunteers? We have worked hard over the years to make a clear division between what the volunteers can do and what is best undertaken by a professional conservator”.

This remark underscores the first chapter of Textile Conservation: Advances in Practice which considers the changing context of textile conservation. The economy has an enormous impact on our profession with far reaching effects on the education of conservators, the positions available and opportunities to freelance workers. The book’s editors and many of its case-study authors were experiencing these effects first hand during the time of researching and writing. Our ethics need to keep pace with these changes (Richmond and Bracker 2009, xvii), not only in how we treat objects and work with different communities but also in how we treat each other. The TSG members had the courage to start a discussion about the ethics of our working relationships with other conservators during this session. Let’s hope it continues.
PANEL DISCUSSION: WHY WE DO WHAT WE DO: ETHICS AND DECISION-MAKING

ACKNOWLEDGMENTS

Frances Lennard would like to thank FAIC/Samuel H. Kress Foundation for receiving the international travel grant for speakers. Patricia Ewer and Frances Lennard would like to thank our panelists for their original contributions to Textile Conservation: Advances in Practice and their participation in this panel. We would also like to thank Susan Mathisen for encouraging us to become involved in the year’s Textile Specialty Group meeting.

REFERENCES


AUTHORS’ BIOGRAPHIES

PATRICIA EWER is the principal of Textile Objects Conservation. She is a conservation professional with experience in treating textiles, managing and staffing conservation projects. She has held conservation positions at Historic Royal Palaces (U.K.), Midwest Art Conservation Center (Minneapolis, Minnesota), Biltmore House (Asheville, North Carolina), Textile Conservation Laboratory at the Cathedral Church of St. John the Divine (New York, New York), and The Textile Conservation Workshop (South Salem, New York). She has been a Professional Associate of the American Institute for Conservation of Historic and Artistic Works since 1989. She served as vice-chair and chair for the AIC Textile Specialty Group in 2008-2009. Address: Textile Objects Conservation, 5975 Ridgewood Road, Mound, MN 55364. Phone: 651-263-6899; e-mail: pewer@citlink.net

FRANCES LENNARD is a senior lecturer and convenor of the MPhil Textile Conservation programme at the University of Glasgow, UK. She was formerly the programme leader of the MA Textile Conservation at the Textile Conservation Centre (TCC), University of Southampton. Frances took her first degree in History at the University of Warwick, then studied at the Textile Conservation Centre for the postgraduate Diploma in Textile Conservation. She worked as a textile conservator in the Conservation Services section of the TCC for five years, then spent eleven years working as a freelance textile conservator in Somerset, in partnership with Fiona Hutton, working on textiles for a wide variety of clients throughout the south-west and further afield. She is a former chair of the Textile Section of the United Kingdom Institute for Conservation (UKIC), and is currently an Assessor for PACR, the Professional Accreditation of Conservator-Restorers scheme, for the Institute of Conservation. Address: Centre for Textile Conservation and Technical Art History, School of Culture and
MODERATORS: PATRICIA EWER, FRANCES LENNARD
PANELISTS: JULIA BRENNAN, CHRISTINE GIUNTINI, SUSAN HEALD,
MARY WESTERMAN BULGARELLA
PARTICIPANTS: NICOLE BLOOMFIELD, BETH SZUHAY

Creative Arts, The University of Glasgow, 8 University Gardens, Glasgow, United Kingdom, G12 8QH. Phone: +44 (0) 141 330 7607; e-mail: Frances.Lennard@glasgow.ac.uk

PANELISTS’ BIOGRAPHIES

JULIA M. BRENNAN has worked in the field of textile conservation for over 25 years. She frequently lectures to historical societies and collector groups on the care and display of textiles and is passionately committed to conservation outreach. From 2000 to 2008, she led four textile training workshops in Bhutan and helped establish their Textile Museum. In 2005 Julia conducted a conservation seminar and mounted a national exhibit of historic 19th century textiles in Madagascar. And in 2007 Julia taught the first ever textile conservation workshop at the National Bardo Museum in Algiers. She is a Professional Associate of the American Institute for Conservation and a Director of the Washington Conservation Guild. Her company, Textile Conservation Services, founded in 1996, is based in Washington DC. Address: Textile Conservation Services, 3924 Ingomar Street, NW, Washington, DC, 20015. Phone: 202-362-1941; e-mail: julia@caringfortextiles.com.

MARY WESTERMAN BULGARELLA obtained a Bachelor degree in Art History and a Master’s degree in the Conservation of Artistic Works, and subsequently trained in textile and costume conservation. Her professional work focuses not only on interventions and their documentation but also on problems pertaining to the research of materials and methods of storage and display. She has collaborated with an array of museums and institutions in Italy and abroad and has published many articles on conservation related subjects. At the present she is a freelance consultant on conservation projects as well as organizing conferences on significant textile and costume themes. Address: Via Delle Cinque, Giomate 10, Florence 50129, Italy. Phone: 39-055473653; e-mail: m.westerman@sbcglobal.net

CHRISTINE GIUNTINI is the textile and organic artifact conservator for the Arts of Africa, Oceania, and the Americas at the Metropolitan Museum of Art (MMA) in New York City, where she has worked since 1981. She attended the Conservation Program at the Institute of Fine Arts and studied textile conservation under Nobuko Kajitani at the MMA. Her particular areas of interest are three dimensional fiber artifacts, archaeological textiles and feather work, and the development of mounting and exhibition techniques for these types of complex artifacts. Address: Arts of Africa, Oceania, and the Americas, The Metropolitan Museum of Art, 1000 Fifth Avenue, New York, NY 10028, 212-650-2594. Phone: 212-650-2594; e-mail: Christine.Giuntini@metmuseum.org.

SUSAN HEALD joined NMAI’s conservation staff in 1994, becoming senior textile conservator in 2001. She served as textile conservator at the Minnesota Historical Society from 1991 to 1994, and was awarded a Conservation Analytical Lab postgraduate fellowship in 1990. She holds an MS in Art Conservation with textile major/objects minor from the University of Delaware/Winterthur Museum and a BA in Chemistry and Anthropology from the George Washington University. She served as chair and vice-chair for the AIC Textile Specialty Group in 1997-1998, and was on the board for the North American Textile Conservation Conference from 2005 to 2009. Address: National Museum of the American Indian, Cultural Resource Center, 4220 Silver Hill Road, Suitland, MD 20746-2863. Phone: 301-238-1419; e-mail: heals@si.edu.
PARTICIPANTS’ BIOGRAPHIES

NICOLE BLOOMFIELD is the Mellon Fellow at Los Angeles County Museum of Art, Textile Conservation, Conservation Center. Address: 5905 Wilshire Boulevard, Los Angeles, CA 90036. Phone: 323-857-6169; e-mail: nbloomfield@lacama.org

BETH SZUHAY was with the Fine Arts Museums as a textile conservator from 2001-2011. She holds an MS from the Winterthur/University of Delaware Program in Art Conservation, and a BA in International Studies from Miami University in Oxford, Ohio. In spring 2011, Beth launched her private practice. Address: PO Box 888, La Honda, CA, 94020. Phone: 650-996-4431; email: bethszuhay@gmail.com
THE OBSERVER EFFECT IN CONSERVATION: CHANGES IN PERCEPTION AND TREATMENT OF A MAN’S SILK SUIT C. 1745

LAURA MINA

ABSTRACT

In quantum mechanics, the observer effect postulates that a photon’s status as a particle or a wave is determined by observation rather than the photon’s intrinsic qualities. The observer effect can also provide a useful conceit to explore the ways a conservator’s perception can transform an object’s context, and lead to different treatment choices that may significantly alter the object. The recent conservation of a man’s silk suit from the 1740s provides an opportunity to (re)examine choices made by eighteenth-century tailors and previous conservators through their historical perceptions of the suit.

The suit was accessioned by the Museum of the City of New York in 1938. Its many repairs reflect the different assumptions associated with clothing, costumes, and collections. The recent conservation included mechanical removal of flaking adhesive from a previous treatment, and utilized stitched underlays to consolidate and support tears in the silk suit.

By acknowledging the effects of observation, we can better evaluate the methodologies used by conservators and seek ethical treatment choices for an object’s current needs that balance an understanding of its past and anticipation of its future. This paper will explore the impact of historical and contemporary perceptions of the same suit on treatment choices.

1. INTRODUCTION

The questions that led to this paper stem from the recent conservation of an eighteenth-century man’s silk suit in the collection of the Museum of the City of New York (MCNY) comprised of a matching coat (fig. 1) and waistcoat (fig. 2). Originally it would have included three garments: coat, waistcoat, and breeches. When the museum acquired the suit, however, it was missing the breeches. The suit began as a fashionable garment and is now a museum object; in between it probably entered the second-hand clothing market before becoming a
THE OBSERVER EFFECT IN CONSERVATION
CHANGES IN PERCEPTION AND TREATMENT OF A MAN’S SILK SUIT C. 1745

costume for theatrics and/or fancy dress parties. With each of these roles, the suit’s treatment was determined by the different assumptions associated with clothing, costumes, and collections. Specialists (tailors, restorers, and conservators) worked to shape, remake, restore, and conserve the same suit according to their various perspectives. Quantum mechanics is used as a conceit in this paper to explain how these perspectives shape ethical choices.

The recent conservation campaign focused on the removal of an embrittled paste on the interior of both the coat and waistcoat that fell in flakes from the torn silk whenever the garments were moved (fig. 3). The back of the waistcoat had been cut away previously, which was unsightly and compromised its stability (fig. 4). These conditions required interventive treatment to enable the suit to be exhibited in a way that would be meet requirements of aesthetic and structural integrity. This intensive treatment was justified by the suit’s rarity - the relatively small number of men’s silk suits from the early eighteenth-century in American museums - combined with the suit’s high quality textile and tailoring.

Figure 1: Front view of coat, pre-treatment. Figure 2: Front view of waistcoat, pre-treatment.
An important component of the conservation work was determining which previous repairs had been performed before the suit was acquired by the museum and which repairs were restoration or conservation treatments from the twentieth-century. This distinction was an important factor in making ethical treatment choices. Conservator’s are charged with preserving the physical components of culturally significant objects. Our understanding of cultural significance guides which histories are preserved and restored and which are cleaned or repaired away. While so-called “native repairs” performed by original and/or important owners are sometimes preserved as significant histories, modern repairs and previous conservation treatments are generally replaced to reveal a more authentic history and to show the object’s true nature.

For the textile conservator who must confront physical objects and actively help transform them into museum objects, the language of science complete with theory, experiment, and measurable results provides a tempting framework to understand an object’s true nature. Analytic tests can reveal details about the physical characteristics and degradation of objects. Scientific analysis has also afforded valuable information about materials and environments that can help preserve objects with minimal damage.

And yet scientific analysis cannot fully articulate the cultural significance of an object, as many contemporary conservators have pointed out, including Miriam Clavir and Diana Estop. The seeming dichotomy of static museum object and dynamic material culture subject represents a duality that conservators must consider in order to arrive at informed treatment choices. Treatments need to respect the objects’ histories and their cultural roles. At the same time, all accessioned museum objects must fulfill their (new) roles as such; they must not only be preserved, but made available for research and exhibition.
THE OBSERVER EFFECT IN CONSERVATION
CHANGES IN PERCEPTION AND TREATMENT OF A MAN’S SILK SUIT C. 1745

If the study of material culture seems in conflict with physical science, the specialized field of physics called quantum mechanics may provide common ground. Quantum mechanics is the study of the subatomic world. On the frontiers of measurable time and space, quantum mechanics stresses the importance of context, probability, and relativity in understanding objects and events.

The observer effect is a quantum theory that explicitly articulates the impact of observation – and understanding – on the interpretation of otherwise objective facts. For the physicist, it helps to describe the duality of waves and particles. For the conservator, the observer effect can provide a framework to help acknowledge the impact of subjective observations on the many changes made to this suit over time. Even now, different choices could have been made based on the same information. The treatment could have tried to restore the suit’s original aesthetic, preserved evidence of its wear and use as a garment, or maintained the previous restoration campaign as part of the history of textile conservation. In addition, a conservator’s connoisseurship and understanding of authentic components will inform the treatment proposal. The role of the conservator-observer not only conceptually reshapes the suit, but also influences the suit’s physical future and its impact on future observers.

2. QUANTUM MECHANICS

The modern conservator’s concerns with issues of context, subjectivity, and duality are similar to those of quantum mechanics. The principles of quantum physics provide equations of probability that allow measurements to combine objective and subjective elements. The subjectivity of quantum mechanics refers to the critical importance of context for understanding events. Quantum mechanics explores the duality of particles and waves found in the subatomic world. For example, before the twentieth-century scientists were divided as to whether light was best described as a particle or a wave. Quantum mechanics demonstrated that subatomic objects have both particle and wave characteristics. The observer effect of quantum mechanics explains one aspect of this duality: when light is measured with particle instruments it behaves like a particle, and when measured with wave instruments it behaves like a wave. Although at first this seemed to suggest that the observer was altering the light, it is now understood that subatomic objects have particle and wave attributes that manifest in response to their context.

Any scientific experiment is subjectively tied to the scientist through the conception, implementation, and interpretation of results. Personal subjectivity is described by probabilities of ignorance, while fundamental probabilities refer to information that can never be accurately anticipated. An example of this can be found in the recent conservation of this suit. When I first observed the previous adhesive treatment, with the open weave structure and the adhesive paste, I assumed that it was an original buckram component of the suit (fig. 5). I combined this visual evidence with historical written texts discussing the use of buckram in early suits for shaping. I unknowingly invoked the observer effect: the restorer’s paste was metaphorically transformed into eighteenth-century buckram by my attribution. My first draft of the treatment proposal suggested methods for protecting the flaking “buckram.” If I had implemented this first treatment plan, the suit would still be stiff with adhesive and would have a less graceful silhouette.
LAURA MINA

With continued examination of the placement of the adhesive layer, comparisons with other garments with known adhesive treatments, and schematic drawings showing eighteenth-century suits with interlinings, I finally understood that it was indeed a past restoration and not original buckram. Further analytical investigation shed more light on the adhesive. So far, FTIR and XRD analysis have not been able to completely describe the chemical construction of the paste, but it seems to be similar to the pasta linings used in paintings conservation. While the original misattribution fits within the high probability of ignorance experienced by a student conservator, the paste’s composition will likely remain a fundamental probability based on informed assumptions.

3. CLOTHING

Good conservation and good science begin with observation and research. This suit’s history is almost completely unrecorded, other than brief notes on catalog cards. Any descriptions of its pre-museum past are simply compelling probabilities based on the conservator’s observation and research - already, a somewhat subjective element. Physicists would also argue that the very act of observation seems to go against the conservator’s long held goal of reversibility. The quantum physicist Werner Heisenberg wrote, “every act of observation is by its very nature an irreversible process.” (Heisenberg, 1958, 137). Even if observation does not directly affect the object, it influences and changes the observer.

My research began with the suit’s silk brocade (fig. 6). It has two sets of wefts in pale pink and blue that are used separately and in combination to create the pattern. The quality and design of the textile indicate that it was manufactured during the early to mid eighteenth-century. The fabric was probably woven in either England or France where developments in spinning and weaving technologies would start the Industrial Revolution. These developments led to increased production of textiles, aiding in the rapid turnover of fashion trends. Fashion history suggests a date of circa 1745 based on the silhouette of the suit: namely the collar, cuffs, and side pleats.
THE OBSERVER EFFECT IN CONSERVATION
CHANGES IN PERCEPTION AND TREATMENT OF A MAN’S SILK SUIT C. 1745

During the eighteenth-century fashionable clothing was made bespoke. A wealthy man would select a silk and bring it to his tailor to make into a suit. The suit was made to a man’s individual measurements and styled according to his preferences. Although the MCNY suit is made of silk with a good drape, the wide silhouette is achieved with many layers of interlinings including wool roving, woven horsehair, linen canvas, and linen buckram.

This suit would have been called an habit à la française since the French courts of Louis XIV and Louis XV set standards of fashionable dress for Western Europe and the American colonies. The prestige and power of these garments proved so strong that the insurgents of the French Revolution called themselves the sans culottes (without breeches). They explicitly aligned themselves against the clothing of the courtly ancien regime. Perhaps ironically, our suit is now sans culottes.

The man who commissioned and wore this suit lived in a society that increasingly expected to find truth in scientific experiment and logical reasoning rather than in religious faith or emotional experience. This was a period of scientific and philosophical revolution that transformed Western societies. Unsurprisingly, men’s fashions changed with their thoughts: the Age of Enlightenment, for example, coincided with the transition from doublets to suits. Such changes in fashion, science, and philosophy are intimately entwined and have had lasting influences on our modern culture.

The scientific approach, as we practice it today in conservation, was born in this Age of Enlightenment and distinguishes conservation research from purely historical, cultural, and artistic research. Methods of scientific analysis also distinguish conservators from tailors and craft artisans. Both tailors and past restorers have worked on our suit, using tools of their trade and leaving evidence of their skills and purpose. The use of scientific analysis can aid in determining which past work is from whom – and therefore, which should be kept or changed as this garment is shifted into its next phase of museum object.
4. COSTUME

The careful attention to detail found in the construction of the suit shows how much value Western society placed on silk textiles and garments. While a new suit was a considerable investment, eighteenth-century clothing had a high resale value. Many tailors would remake, or turn, garments that were bought second-hand. The original owner of the suit probably sold it or gifted it as a hand-me-down. Finally, when it was past its fashionable re-use phase, the suit could have been acquired from the second-hand clothes market by a theater that wanted authentic costumes. One of the linings of the waistcoat has a large stamp reading “The property / of H. Compton / S. Hanover St.” which connotes ownership by a commercial entity – possibly a theater or costume rental shop although research could not locate the specific company (fig. 7).

Figure 7: Detail of waistcoat interior showing stamp on lining.

Fashion and costumes rely on mutual understandings between wearer and audience to communicate cultural concepts of gender, status, and individuality. This suit’s pleated skirts and large-scale cuffs challenge contemporary mainstream notions of masculine power and self-restraint. The pale pink and blue of this textile, coupled with its delicate silk threads, are in extreme contrast to the masculinity of dark wools and straight silhouettes used for men’s suits from the nineteenth-century through today’s contemporary suits. The audience – whether in a boardroom, theater, or museum – needs to be able to place the suit in its context.

Terrance Turner has called clothing our “social skin,” and our intimate relationship with our clothes can make the conservation and study of fashion especially challenging (Schneider 1993, 204). The suit’s original owner would have considered his garments to be appropriate expressions of sophisticated masculinity. Clothing can seem to literally embody gender; for example skirts strongly connote femininity. Garments are not passive symbols because they actively create the gender that they represent. This is analogous to descriptions of particles in quantum mechanics. Physicist Kenneth Ford wrote, “what particles are and what they do are intertwined . . . the properties of the particles get mixed up with the actions of the particles” (Ford, 4). Objects continue cultural performance within museums, and their display should be designed to clarify cultural assumptions.
THE OBSERVER EFFECT IN CONSERVATION
CHANGES IN PERCEPTION AND TREATMENT OF A MAN’S SILK SUIT C. 1745

After Compton the next known owner of the suit was Henry Alexander Ogden, who donated the suit to the MCNY. His use for this garment is unknown – perhaps as an artist’s prop or as a fancy dress costume for a party, or perhaps he was just a collector. Ogden was an artist with a particular interest in American history; he created detailed illustrations of uniforms worn during the Civil War. As a member of New York society, it is likely that he attended some of the costume balls held during the late nineteenth and early twentieth-centuries.

The variety of darning stitches on the coat were probably added during the suit’s use as a costume – whether during its time at Compton’s or with Ogden. Such stitches would have provided considerable support to a garment experiencing the movements and abrasions of wear and laundry. They do not provide the aesthetic beauty, minimal intervention, or reversibility sought by conservation treatments.

5. COLLECTION

The suit was donated to the MCNY in 1938, and was displayed in a large exhibition, *Those Fabulous New Yorkers*, as well as in period rooms. It was apparently loaned to the museum prior to its accession since the catalog card briefly states, “cleaned & restored 2/18/35.” An early and ambitious campaign, presumably the 1935 restoration, combined stitched repairs with adhesive supports. The treatment utilized patches cut from the back of the waistcoat to replace damaged areas on the front and back of the coat. Less damaged areas were supported with a thick paste and underlay of open weave fabric. The sleeves were detached to facilitate the application of paste. The patches were hand-sewn, and the sleeves were reattached with a sewing machine. Both of these treatments used the same gray thread, which suggests that the stitched and adhesive treatments were done at the same time (fig. 8).

![Figure 8: Details of coat interior showing a) thread used for inserted patches and b) thread used in sewing machine to reattach sleeves.](image)

The adhesive did not prove stable over time and failed to consolidate or support the silk. In order to close and support the many tears in the silk, it was necessary to first remove the adhesive paste. Fortunately, the very qualities that made it a poor adhesive aided its removal. The embrittled adhesive was easily, if laboriously, removed using needle-nose tweezers and a vacuum on low suction. The adhesive had not penetrated the silk textile and could be carefully removed mechanically (fig. 9). The adhesive proved soluble in alcohol and acetone, but this type of treatment was impractical given the complex tailoring of the garments and the solvent’s propensity to discolor the silk.
LAURA MINA

Figure 9: Details of treatment showing a) adhesive paste with support fabric removed, b) mechanical removal of adhesive paste.

Current conservation practices emphasize the value of minimally interventive treatments to maximize preservation of original material for future generations. Evidence of the past adhesive treatment with its patches cut from the waistcoat show a different, now dated, understanding of the suit’s role within the museum: the coat was conceived as a three-dimensional fashion plate, as a work of visual art. Within this context, the holistic preservation of the suit was subverted in order to restore the visual appearance of its facade. In other words, it was deemed acceptable to cannibalize the back of the garment to project a more complete front. While we have come a long way in our thoughts on such a treatment, there are still occasional lingering issues concerning the balance between preventative care, true nature, and display that remain contested.

The 2010 conservation campaign repeated the goals of the earlier treatment to provide the structural and aesthetic integrity needed to exhibit the suit (fig. 10). While the goals of the two campaigns are similar, their methods are different. Unlike the use of adhesive and cannibalized patches, the recent treatment included the application of underlay patches using very fine monofilament thread with laid and couching stitches (fig. 11). This technique is meant to hide the work of the conservator so that the audience’s attention will be directed to the object. It is also designed to damage the fabric as little as possible by limiting the number of stitches and using a thread with a similar diameter to those in the textile.
Laid and couching stitches were used to close small tears on the coat and waistcoat near the waistline, possibly caused by abrasions to warp threads. The same stitches were used on the coat armscyes and sleeves to stabilize areas with more extensive tears and losses. The laid stitches were spaced approximately .75 inches apart, depending on the placement of tears. The waistcoat armscyes were so creased and distorted, that humidification was required prior to stitching underlays in place. This was done with distilled water through a Gortex® barrier.

While it is hoped that the 2010 treatment will not need to be replaced, it should be easier to remove the stitches than the previous adhesive without causing additional stress to the textile. While the loss of the waistcoat back could not be amended, the back was treated with silk replacement panels to provide additional support and a more attractive appearance (fig. 12). The 2010 treatment is adhering to contemporary conservation standards, as was the 1935 treatment for its day. Let’s hope that in another 70 years this suit is not the subject of a scathing presentation (perhaps holographic instead of PowerPoint) looking back sadly at yet another set of unenlightened choices!
6. CONCLUSION

During the nearly 300 years since the suit was constructed, it has evolved from a fashionable garment to a theatrical costume, to an accessioned museum object. Even as a museum object, changes to it through restoration and conservation continued the suit’s evolution. With each alteration to the original, the perceptions of the suit shifted; these changes are physically manifested in the physical wear and repairs on the garments.

The suit was acquired by the MCNY during the 1930s, a time when quantum mechanics revolutionized physics and chemistry by describing the dual nature of particles and waves. This revolution did not completely overthrow Classical science. Rather it extended the ability of science to describe a world full of probabilities and contextualized experiences, rather than one of absolute objective truths.

Museums have also shifted during this time in attempts to express a wider variety of perspectives. Conservation practices and ethics reflect and support these changes. The seemingly objective catalog of an object’s physical characteristics is no longer considered a sufficient basis for ethical conservation treatments. Current conservation ethics strive to encompass many ambiguities: the multiple meanings and interpretations for each object; the duality of authentic object and accessioned object; the importance of both physical science and material culture to describe an object’s significance and thus develop treatment and exhibition proposals. The theories of quantum mechanics were developed to describe the actions and ambiguities of subatomic particles. While the theories themselves do not relate to conservation, their guiding questions can help conservators make ethical choices that consider the past, present, and future lives of objects.

As Heisenberg wrote in Physics and Philosophy: “The two processes, that of science and that of art, are not very different. Both science and art form . . . a human language by which we can speak about the more remote parts of reality, and the coherent sets of concepts as well as the different styles of art are different words . . . in this language” (Heisenberg, 109).

The observer effect can provide a conceptual framework to help conservators make ethical treatment choices that benefit from both art and science while acknowledging our own subjective place in an object’s history.

ACKNOWLEDGMENTS

Many thanks are due to Phyllis Magidson, Curator of Costume and Textiles, M.C.N.Y.; Denyse Montegut, Associate Chair of Fashion and Textile Studies, F.I.T. and advisor for my Qualifying Paper; and Mary Ballard, Senior Textiles Conservator, Smithsonian’s M.C.I. I would also like to thank Jennifer Giaccai, Conservation Scientist, Smithsonian’s M.C.I.; Jia-Sun Tang, Senior Paintings Conservator, Smithsonian’s M.C.I.; Nicole Little, Physical Scientist, Smithsonian’s M.C.I.; and Gil Taylor, Librarian, Smithsonian’s M.S.C.

REFERENCES


THE OBSERVER EFFECT IN CONSERVATION
CHANGES IN PERCEPTION AND TREATMENT OF A MAN’S SILK SUIT C. 1745


FURTHER READING


LAURA MINA


BIOGRAPHY
Laura Mina is a textile conservator with an M.A. in Fashion and Textile Studies: History, Theory, Museum Practice from the Fashion Institute of Technology. This paper explores research questions that grew out of her thesis, “Men In Buckram: The Tailoring and Conservation of a 1740s Man’s Silk Suit.” In September 2011 she will begin a Mellon Fellowship in costume and textile conservation at the Philadelphia Museum of Art.
A VERSATILE MANNEQUIN DESIGN

GWEN SPICER

ABSTRACT

This paper discusses the mannequin design developed for the Smithsonian National Air and Space Museum’s (NASM) exhibit, America by Air. It is a design that has been used by the author for several other projects subsequent to its development. NASM wanted an easy-to-dress mannequin form, for both male and female garments, that was made from a list of materials specified by them. A design was created with the help of SmallCorp Inc. What differentiates this mannequin from others is the internal armature, which later became known as the “side-ways ladder.” The internal armature makes the form easy to produce, reliable and versatile. One step of the mannequin’s production is delegated to metal working specialists. This allows the conservator to focus on shaping the Ethafoam. Often conservators try to undertake all steps of mannequin production. Now SmallCorp Inc can create the armature onto which the mannequin is built.

UN VERSÁTIL DISEÑO DE MANIQUÍ: RESUMEN – Este documento trata acerca del diseño de maniquí desarrollado para la exhibición “America by Air” del Museo Nacional del Aire y del Espacio (NASM) de la Institución Smithsonian. Es un diseño que la autora utilizó en otros proyectos anteriores a su desarrollo. NASM necesitaba la forma de un maniquí fácil de vestir, tanto para prendas masculinas como femeninas, hecho con una lista de materiales especificados. Se creó un diseño con la ayuda de SmallCorp Inc. Lo que difiere es la armadura interna, que más tarde se dio a conocer como “escalera lateral”. La armadura interna hace que la forma sea sencilla de utilizar, confiable y versátil. Una etapa de la producción del maniquí se delega a especialistas en metalistería. Esto permite que el restaurador se centre en dar forma a la espuma de polietileno Ethafoam. A menudo los restauradores tratan de llevar a cabo todas las etapas de producción. En este caso SmallCorp Inc. se encarga de crear la armadura sobre la cual se formará el maniquí.

1. INTRODUCTION

This paper is not solely about the 33 mannequins built for the Smithsonian National Air and Space Museum (NASM), but rather about the mannequin form that was designed for the project. It is a design that has since been used for several projects, and it is well suited for many others (fig. 1). This mannequin design resulted from needs established by the staff at NASM who wanted an easily dressed form for both male and female garments. They also had a list of very specific materials. With the help of Molly Wood at SmallCorp Inc., a design was created. What began as a concept sketch by NASM staff with two vertical posts forming an internal armature and two independent torso forms ultimately became known as the “side-ways ladder”. The ladder is embedded into two halves of vertically positioned 5.1 or 7.6 cm (2 or 3 inch) thick Ethafoam®. The torso sections are stacked and slide up and down on vertical posts or stands. They are supported in place and at the desired height with stop-clamps.

2. BENEFITS & VERSATILITY

This mannequin design has many benefits. Many conservators have experienced the occasion where hours are spent carving and covering Ethafoam® only to have it inserted at an incorrect angle onto the metal post. With this design, the placement of the armature ensures straightness on the base. In using this design we have found that the process is quite quick. Dressing of the mannequin is made simple as all of the parts disassemble (fig. 2). The design is not limited to a fashion period or ethnic group; a full range of contemporary garments can be supported with this design.
An aspect that should not be overlooked is that this design separates talents and knowledge of the conservator and the metalsmith. This arrangement is found at larger institutions, but now those in smaller museums and in private practice can delegate or outsource this part of the process. The hope is that the design is successful to such a degree that an institution can mix and match components in order to display a wide variety of costume garments easily over the course of many exhibits.

3. MANNEQUIN COMPONENTS

3.1 INTERNAL ARMATURE

The internal armature is a ladder-like structure made of two vertical 2.5 cm (1 inch) diameter aluminum tubes separated by two flat horizontal aluminum pieces. The inside diameter of the vertical tubes is sized to slide easily on the posts of the base. This ladder-like armature is then embedded into two pieces of vertically positioned 5.1 or 7.6 cm (2 or 3 inch) thick Ethafoam®.

The number of armature sections needed for each mannequin is based on each specific garment. Armatures can be measured for single or double torso sections. A double torso assemblage would include one section for the bodice, or upper torso, and one for the hips, or lower torso. The armature sections can be sized for the particular garment. Therefore the upper flat part supporting the shoulders can be made longer or wider, which would be necessary for a heavy coat or jacket. The tube height is determined by the waist to shoulder measurement for the upper torso and on the waist to in-seam measurement for the lower torso (fig. 3a). An internal armature can also be designed to bridge to two torso sections, also known as the elongated torso (fig. 3b). The tubes are positioned according to leg spacing and further described in section 3.2.
3.2 BASES

The base posts act like legs, allowing trousers or leggings to be easily incorporated into an ensemble. The stacking of components with the flexibility of the stop-clamps allows for easy dressing and assembly of a full range of garments, where each component or the entire garment is supported and then placed onto the base as seen in figures 2 and 13c.
GWEN SPICER

The smoothness, by which the internal armature slides along the posts, lowers the stress and handling of the mounted artifact. This can be useful for artifacts that travel. Garments can be transported on their mounts, separate from the base with the stop-clamps in the appropriate position. The base would then be positioned on the display deck, followed by the supported garment.

The spacing of the posts can accommodate each gender. A rough spacing for male and female forms has been determined through experience: 20.3 cm (8 inches) on center for males and 15.2 cm (6 inches) on center for females. SmallCorp can provide a square shaped base or for large projects round bases can be an option to order. The base and posts can be powder coated in a range of colors (fig. 4a). The weight of the base is sufficient to stabilize the mannequin, regardless of its height and the weight of the artifact.

4. MEASURING

To determine the individual sizes for each form and its necessary parts, a measuring checklist form is created (Appendix 1). This form was used when each garment was measured. The resultant measurements were then translated to sizes for the internal armatures. From this the flat pattern was created that is used for the outer dimensions and shape of the Ethafoam®.

The cross-section seen in figure 5 shows how the armature size is determined as well as how it is positioned in the Ethafoam®. Through trial and error we found that the top of the posts should end a few inches below the top of the upper torso. This allows room for the torso to be raised and lowered, while also keeping the torso stable.

![Figure 5: Cross-section of the armature with suggested placement measurements](image)
A VERSATILE MANNEQUIN DESIGN

5. POSITIONING

When two torso sections are used, both are imbedded into Ethafoam® and they are positioned onto the posts in contact with one another. The internal armature can be positioned in the form’s silhouette as necessary, either at the bottom edge of the upper torso to align with the top edge of the lower torso (fig. 3a), in essence at the waist. An elongated armature that bridges two torso sections, as seen in fig. 3b can have Ethafoam® that extends below the lower horizontal member. Access space to tighten the stop-clamps needs to be created.

6. EMBEDDING THE ARMATURE AND CARVING

The actual creation of the torsos is no different than how one would make any other mannequin form. Begin with a pattern for the estimated size of the garment and that will create the outer dimension of the Ethafoam®. The location of the armature is determined at this point. After the shape is cut, the armature is traced. Figure 6 shows the armature on top of the paper pattern. Squareness of the armature is important when positioning. When square, the amount of carving and fitting time is reduced. It is at this time that you ensure that the form will be straight on its stand or base. As that each component is dependent on the other.

Another aspect of the form’s design is the armatures position in the depth in the Ethafoam®. The armature can be either positioned center of even thicknesses of Ethafoam® or a mixture of thicknesses can be used or even the armature placed shallower on one side and deeper on the other. (See following discussion of Tight Support, 8.1)

Assorted knifes are used first to cut the straight lines when cutting Ethafoam® to accomodate the armature (fig. 7),and for cutting the vertical areas where the aluminum tubes fit. Woodworking tool do the best job. After some practice this is quite quick. The tool needs to be rocked gently side-to-side. It is also critical to stay level. One has a tendency to slope down with the tool as you move along. First cutting the outer edges of the channels with a straight knife will assist with keeping the channeling straight. The remaining stages are the same as those necessary for other mannequins made with polyester batting and stockinette. It is recommended that carving of the torso occur after it is positioned on the base. This both supports the torso section while carving and ensures straightness.

Figure 6 (left): Pattern and armature positioned on the Ethafoam in preparation for cutting. All components have been squared. The paper pattern is secured to the foam with t-pins. Figure 7 (right): Carving tools, including the curved wood chisel.
7. TYING THE ETHAFOAM TO THE ARMATURES (OPTIONAL)

The vertical tubes of the internal armature allow the Ethafoam® planks to be tied together with cotton twill tape as an option to the more permanent hot melt glue. Two holes are created in the Ethafoam® using a long sharp tool. An upholstery regulator was useful, but one could also use a long drill bit. Holes were positioned on either side of the vertical tubes. With tying, the Ethafoam® can be easily removed from the internal armature and saved. This allows for the internal armature to be reused with different sized Ethafoam®.

8. VARIATIONS AND ADD-ONS

Since the initial project, the armature design has been used for many projects and for a full range of three-dimensional artifacts. The following discusses some examples of how the form can be used and modified for a full range of situations, whether for better support, or interpretation of the artifact. This adaptability fully represents the design’s versatility.

Wood armor from Alaska that measured 28” H was supported with a tabletop-sized armature designed to fit in a small display case or other limited space restrictions. The in-the-round display case allowed the visitor to closely inspect the artifact. The armor had previously been displayed flat high up on a wall, where it could not be easily seen. The armor’s support consisted of a single torso section and base with short posts. The base was powder coated to match the case creating a sleek design (fig. 8). The posts were made the exact inside height of the internal armature.

A nineteenth-century taffeta dress utilizes an elongated torso. The internal torso was made with slightly longer tubes, allowing the lower horizontal flat member to be positioned below the waistline. Therefore the garment was supported with one long torso armature instead of two shorter ones (figs. 9a-c). The dress’s narrow waist was positioned along the armature’s inner region of the posts. The lower horizontal member of the armature ensured support of the extra Ethafoam® necessary for the full skirt. With the location of the horizontal member, any potential sagging of the Ethafoam® is reduced if not prevented.
A VERSATILE MANNEQUIN DESIGN

Figure 9: 1830s Taffeta Dress: Figure 9a (left): The elongated torso armature. Figure 9b (middle): Armature with first layer of soft supports. Figure 9c (right): Fully dressed armature

In the exhibition, *Woven by the Grandmothers*, at the National Museum of the American Indian’s Geroge Gustav Heye Center, all of the form’s armatures for Navajo wearing blankets were made of PVC pipe. (Spicer & Heald, 1997) Here the same chief pose for this Navajo blanket was created with this new armature (figs. 10a-c). The PVC pipes were ideal for this temporary exhibit. They too were the internal armatures that were embedded into the Ethafoam®. The wide variety of fittings added to the flexibility of postures and poses. However, this one venue exhibit became a ten-venue exhibit, traveling to North, Central, and South America. In hindsight a more robust armature would have been better suited, and the metal armature making delegated to another specialty source. The tight exhibition schedule for this project only allowed for a production situation where the conservators performed all tasks or fabricated all mounting elements.

Figure 10: Woven by the Grandmothers: Figure 10 a (left): Forms on exhibition. Figure 10 b (middle): Mannequin form with rigid arm. Figure 10 c (right): Dressed mannequin.
For a re-creation of the Caroline G. Parker’s Seneca garment from the Morgan collection, which has an over dress, wrap skirt and leggings, an elongated torso was used for both the skirt and dress (figs. 11a-b). By positioning the waist in the vertical tube region of the armature, like the Taffeta dress, plenty of room was available for the skirt’s support. A wide cotton-webbing belt with Velcro fasteners was created.

Figure 11: Buffalo & Erie County Historical Society Figure 11a (left): The elongated torso, Figure 11b (right): The wrapped skirt held in place with a cotton-webbing belt secured with Velcro.

8.1 LEGGINGS, TIGHTS AND FOOT-WEAR

Legging supports were created by inserting a 2.5 cm (1 inch) diameter pipe into the legging support and a second set of stop-clamps. The pipes were embedded into two halves of the foam like the torsos. Ethaform® blocks were cut and then carved to the shape to fit the inside diameter of each legging, as seen in fig. 12.a. When it was time for dressing, the leggings were slipped onto the posts first, and then the upper torso were placed with its own set of stop-clamps. Had the leggings been taller necessitating a taller support, then only one set of stop-clamps would have been utilized (figs. 12a-c).

Figure 12: Leggings: Figure 12a (left): The cross-sections of the two halves of the Ethafoam supports. Figure 12b (middle): The supported legging positioned on the base post. Figure 12c (right): Placing the second legging onto the base
A VERSATILE MANNEQUIN DESIGN

One of the ensembles to be included in the NASM’s exhibition had knit tights that were to be displayed with a mini-skirt. Each component was supported separately; the tights with batting and stockinette leggings and the skirt on a lower torso. When the armature was imbedded into the Ethafoam, it was positioned as far back into the form as possible. This allowed space in the front for the upper section of the tights. The tights were supported with a two-part system due to concerns of the long-term nature of the exhibition. The internal support for the leggings was secured to the torso with Velcro. The support extended above the waist of the tights and the soft side of the Velcro was attached to the extended area. Fig. 13.b shows the front side of the lower torso with the hook side of the Velcro. A stockinette diaper secured to the torso, gently supported tights, as seen in fig. 13.c to the upper front of the lower torso. (figs. 13a-d).

Figure 13: Tights: Figure 13a (top left): Supports for the tights and lower torso armature for the mini-skirt. Figure 13b (top right): Detail of the front face of the lower torso, Figure 13c (bottom left): The supported tights in place with the stockinet diaper in position. Figure 13d (bottom right): The dressed lower torso before being positioned onto the base posts.
GWEN SPICER

When a garment is displayed with shoes or boots, the same technique of moving the armature back behind the vertical center of the form can be employed. This creates space within most trouser legs for the footwear to be positioned in front of the base’s post.

9. ORDERING FROM SMALLCORP INC.

Appendix 2 provides necessary notes and a checklist to assist when placing an order with SmallCorp Inc. Each component has its own needs, height, width, spacing etc. Standard sizes are being developed for small, medium, and large mannequins that also might be helpful for some.

When ordering armature components from SmallCorp, several measurements are needed. Below is a list to guide you with those specifics:

2. Base shape – round or square.
3. Number of torso sections.
4. For each section you will need to know the height of the tubes and length of the flat members.
5. Color to be powder coated or the surface preparation.
6. Any additional special parts like heads and/or legs or other specialty support needs.

10. CONCLUSIONS

This “side-ways ladder” mannequin provides another tool in a conservator’s arsenal for displaying three-dimensional costume artifacts. It is a design that can be easily adapted for different types and sizes of garments, making it easy to produce, reliable and versatile. The internal armature also ensures that the resulting mannequin will be straight and upright. By delegation one step of the mannequin’s production to metal working specialists, the conservator can focus on shaping the Ethafoam® and supporting the artifact.

APPENDIX 1: MANNEQUIN MEASUREMENT SHEET

1. Shoulder Width:

Torso Height:

Waist Width:

2. Waist width:

Lower Torso Height:

3. Base: Square

Posts: (___)” Height

Posts: (___)” on center

Color:
A VERSATILE MANNEQUIN DESIGN

APPENDIX 2: MANNEQUIN MEASUREMENT NOTES

FEMALE FORMS
1. Post widths mostly 6” apart.
2. Lower torsos heights are 8” for skirts, with typically 7” for pants.
3. Lower torso is Ethafoam minus 3” at waist (upper and lower horizontal are the same.)
4. Upper torso width is Ethafoam minus 3” at waist and 4” minus shoulder width.
5. Upper torso height is 3” minus shoulder to waist measurements.
6. Neck is 3” (from upper horizontal to lower collar of garment) plus 4” to base of head.

MALE FORMS
1. Post widths mostly 8” apart.
2. Lower torsos heights are typically 11”, three exceptions.
3. Lower torso is Ethafoam minus 3” at waist (upper and lower horizontal are the same.)
4. Upper torso width is Ethafoam minus 3” at waist and 4” minus shoulder width.
5. Upper torso height is 3” minus shoulder to waist measurements. (same as female)
6. Neck is 3” (from upper horizontal to lower collar of garment) plus 5” to base of head.

ACKNOWLEDGMENTS

As with all good projects there are many to thank: Molly Wood, Van Wood, and Wendy Sawyer at SmallCorp Inc. and all of their staff; Nicolette Cook, Randy Dell’Aqua, Anna Hodson, Shaun Pekar, Danielle Swanson, Rebeca Torres, and Abby Zoldowski, all of Spicer Art Conservation, LLC; and Jeannie Whited, Smithsonian National Air and Space Museum.

REFERENCES


FURTHER READING


GWEN SPICER

SOURCES FOR MATERIALS

Side-ways ladder mannequin Armature  
SmallCorp Inc.  
19 Butternut Street  
Greenfield, MA 01301  
Phone: 800-392-9500; 413-772-0889  
Fax: 413-773-7386  
Email: info@smallcorp.com

Ethafoam®  
Dow Chemical  
Midland, MI 48674  
800/258-2436  
Manufacturer: Thermal Foam/Syracuse, Inc.

Celluplank 220  
John Jeffery  
P.O. Box 1981  
Cicero, NY 13039  
(800) 873-6267

Gwen Spicer, since 1995 a conservator in private practice in upstate New York, treats textiles, upholstery, and organic artifacts. She assists many small- to mid-size museums and historical societies with collections care, storage, exhibitions, and has become known for her innovative conservation treatment. Ms. Spicer also provides expertise in the areas of housekeeping strategies, integrated pest management, and disaster planning. She has taught and lectured around the world. She received her MA and certificate of advanced study in art conservation from the State University College at Buffalo. She has held internships in both the textiles and decorative arts labs at the New York State Bureau of Historic Sites. She later worked for the Rochester Museum and Science Center and at the Metropolitan Museum of Art. She is a Fellow of the AIC. Address: 305 Clipp Road, Delmar, NY 12054. E-mail: gwenart@capital.net
USES OF THE FIBER REFERENCE IMAGE LIBRARY

KATHRYN A. JAKES

ABSTRACT - The Fiber Reference Image Library (FRIL), https://fril.osu.edu/, is a digital database that contains micrographic images of textile fibers examined using brightfield, darkfield, polarized light, and differential interference contrast techniques; each sequence of images provides complementary information contributing to identification and characterization. Associated text provides description of details in the images and information concerning the textile source of the fiber. The site is organized into collections of plant, animal, and manufactured fibers; commercial and noncommercial fibers are included and new collections are added regularly. Subcollections include images of fibers from 18th, 19th, and 20th century garments from Ohio State University’s Historic Costume & Textiles Collection. These subcollections are linked to a database of full and close-up views of the garments. FRIL supports the textile conservator in fiber identification and characterization of fiber condition. It also can be used in customs verification, in forensic investigation, and in fiber research as well as a teaching tool that engages young students in science, arts, and humanities through the subject of fashion, textiles, and fibers.

1. INTRODUCTION

Convened by J. Merritt of the Harper’s Ferry Center, National Park Service, a group of 20 international participants met in 2003 and 2005 to discuss the concept of “development of a web-accessible reference library of deteriorated fibers using digital imaging and image analysis” (Merritt 2004). The core group developed a vision of a database which integrates fiber images from collections worldwide that provide evidence for fiber identity and condition along with details of the artifacts from which they came, and treatments which had been incurred by those artifacts. F. France and M. Toth developed an exemplar of the database concept and tested it in the period between the two meetings. Two proposals to federal agencies were denied, and as time passed and changes occurred including the loss of individual members, achievement of the concept appeared increasingly unattainable. Supported by the National Center for Preservation Technology and Training, K. Jakes developed a prototype of the envisioned Fiber Reference Image Library, constructing a site at Ohio State University using a media management program which allowed her to design the site without having to create the underlying software program for the database. This report describes the scope of the database and its uses, and discusses the potential for linkages to other locally developed fiber reference image libraries which, over time, could achieve the global database designed originally envisioned.
2. MATERIALS AND METHODS

Fibers to be micrographed were gathered from textile instruction collections, the Comparative Plant Fiber Collection, and from artifacts housed in the Ohio State University’s Historic Costume & Textiles Collection (HCTC). The Comparative Plant Fiber Collection contains representative plant specimens and fibers obtained from those plant species typical of those used by prehistoric native American groups in eastern North America. This collection, supported by an NSF archaeology grant, includes fibers mounted on microscope slides and photographic slide images; development of the Fiber Reference Image Library allowed this collection to be digitized and made more accessible to the community of fiber perishables scholars. One hundred garments from the HCTC were selected for study dating from 1750 to the present and representing costume history over the decades, as well as evolution of technology and design.

When the Comparative Plant Fiber Collection was created, fibers were mounted with Permount™ (Fisher Scientific), a medium with a Refractive Index of 1.515. In the current work, newly collected fibers were mounted using Meltmount™ (RI 1.539) (Cargille). Each fiber on the microscope slides was examined at both 200X and 400X magnification using brightfield, darkfield, polarized light and differential interference contrast techniques and employing a Zeiss Axioplan Research Microscope. Digital images were collected using a Zeiss HRC Axiocam camera. After performing white and black balancing to calibrate the camera, images were collected in Zeiss format with a resolution of 2776 x 2080 pixels scanned color. All images were labeled with a scale bar and saved in TIFF format with identifying information including date of image capture. If further information is needed, the Zeiss software stores a history of the image preparation steps and size.

For each of the fibers, effort was made to isolate a single fiber in order to discern distinguishing characteristics and reflect these in the images. Where appropriate, such as in cases of bast fibers, images were taken of fiber bundles and associated materials, thereby displaying the structures that remain adjacent to fibers that might provide additional identifying information. For the bast fibers, a modified Herzog test was also conducted. The single fiber was placed at the position of extinction relative to the crossed polars and a First Order Red plate was added to the optical train to reveal evidence of fibril spiral direction (Petraco & Kubic 2004). For each of the manufactured fibers, fibers were examined in the position of maximum brightness under crossed polars and oriented with and across the slow direction of the First Order Red plate, thereby determining the sign of elongation. For each of the animal hair fibers, air mounted “semi-mounts” were included to display surface scale characteristics.

The database structure was developed using Ohio State University’s Media Manager program at the site URL of https://fril.osu.edu/. Media Manager is a Microsoft SQL server database and all data fields were mapped to Dublin Core. Consequently, data can be extracted from the database in a variety of formats, it is not held captive by the system and can be migrated to future systems over time as the Fiber Reference Image Library concept is expanded.

Fields that were included in each record of the database were determined by accumulation of fiber information from the botanical and textile fiber literature, including the reports published on the Comparative Plant Fiber Collection (Jakes 1996, 2000, 2004; Jakes et al 1993, 1994), and the textile literature (ASTM 2011; Hearle et al 1998; McCrone & Delly 1979; Petraco & Kubic 2004). Data entry fields included fiber identification information, image capture information and notation of morphological features displayed in the imaged fiber.
USES OF THE FIBER REFERENCE IMAGE LIBRARY

During its development, the database was reviewed by seven individuals with differing interests and research pursuits related to fibers and fiber perishables. The reviewers were asked to test the database, challenge its searchability and its comprehensiveness. Although additions continue to be made to the database, it was released to the public on April 1, 2010. Since its release, comments on the functionality of the database and desirable additions have been received from users of the site.

3. CONTENTS OF THE FIBER REFERENCE IMAGE LIBRARY

The home page of the Fiber Reference Image Library (Figure 1) displays a rotating slideshow of example fibers and labels. A neutral gray background with some texture was selected so as to not interfere in color assessment of the fibers, particularly important for those that display significant birefringence. Tabs across the top include choices of Home, Browse Collections, Glossary and Frequently asked Questions, Resources, News, Search, Contact. The lower half of the page presents tabs titled How to Use FRIL, Research and Outreach. Each of these tabs link to other pages of content that provide further detail on each of these topics.

![Figure 1: Fiber Reference Image Library home page.](image)

The Browse Collections page clearly separates the topics of Animal Fibers, Plant Fibers and Manufactured Fibers with subcollections under each of these, organized as follows. (Note: Because additions are constantly being made, visitors to the FRIL site may see more than the list provided here.)

A. Animal Fibers
   a. Commercial
      i. Alpaca
      ii. Cashmere
      iii. Wool; 1880s; 1960s
      iv. Silk; 1750-1765; 1770-1779; 1880s; 1886; 1922
   b. Other
i. Cat hair
ii. Dog hair
iii. Rabbit hair

B. Plant Fibers
   a. Commercial
      i. Cotton; 1750-1765; 1770-1779; 1880s; 1948
      ii. Flax; 1750-1765; 1770-1779; 1850s; 1880s
      iii. Hemp
          i. Jute
   b. Noncommercial
      i. Dunal paw paw, GA and OH
      ii. Spreading dogbane, GA and OH
      iii. Indian hemp, GA and OH
      iv. Intermediate dogbane, OH
      v. Blue dogbane, OH
      vi. Butterfly weed, GA and OH
      vii. Swamp milkweed, OH
      viii. Common milkweed, OH
      ix. White milkweed, OH
       x. Poke milkweed, OH
       xi. Eastern red cedar, OH
       xii. Giant cane, OH
       xiii. Small cane, OH
       xiv. Black walnut, OH
       xv. Red mulberry, GA and OH
       xvi. Eastern cottonwood, OH
       xvii. Black willow, GA and OH
       xviii. Moosewood, OH
      xix. Narrow-leaved cattail, GA and OH
       xx. American basswood, GA and OH
       xxi. Slippery elm, OH
       xxii. Rattlesnake master, OH
       xxiii. Stinging nettle, GA and OH
       xxiv. Wood nettle, OH
       xxv. False nettle, OH
   c. Manufactured Fibers
      a. Regenerated Cellulose
         i. Cuprammonium rayon
         ii. Lyocell
         iii. Modal rayon
         iv. Viscose rayon
      b. Derivative Cellulose
         i. Acetate; 1970s
      c. Regenerated protein
         i. Azlon
USES OF THE FIBER REFERENCE IMAGE LIBRARY

ii. Soy; 1930s; 2010

d. Synthetic
  i. Acrylic; 1976
  ii. Nylon; Dupont; Filament; Polyamide; Qiana; Textured trilobal nylon
  iii. Polyester; Burrows 1970s; Trigere 1970s; 1980s
  iv. Polylactic acid, PLA

Through links provided on the Browse Collections page, clicking on any of the topics brings the viewer to the collection or subcollection of interest. In each, micrographs are shown of single fibers and fiber groups examined using brightfield, darkfield, polarized light, and differential interference contrast techniques (Figure 2-5); the sequence of images provides complementary information. A further click brings up each individual image with text below it organized to explain the image. Because of the high resolution of the images, the zoom function allows the viewer to focus more closely on features of interest. All images are watermarked to provide security; if one is copied the watermark is carried with the image. For those who want to download a high quality image without the watermark, contact can be made to the manager of FRIL.

Each fiber image record contains descriptive text fields which may include notation of the following, as appropriate:

A. Information associated with image location within the database
   a. Image location on Media Manager

B. Descriptive information concerning the fibrous material from which this individual fiber came
   a. Accession number
   b. Title or label for the fiber
   c. Fiber source, i.e. plant or animal or manufactured
   d. Plant processing category

C. Information concerning image capture
   a. Date
   b. Microscopist
   c. Microscope and camera identification
   d. Mounting agent and refractive index
   e. Microscopic technique employed

D. Information concerning plant fiber morphology and other details of the image
   a. Lumen size/type
   b. Lumen filling
   c. Swelling or bulging
   d. Fibrillation
   e. Fiber size, relative. (Since scale bars are present on all images, the viewer can determine the fiber diameter of any viewed fiber)
   f. Dislocations
   g. Transverse markings
   h. Surface folds
   i. Longitudinal markings
   j. Kinks
   k. Cracks
   l. Crystals, crystal types
m. Cambium
n. Parenchyma cells
o. Results of the Herzog test, S or Z fibril spiral

E. Information concerning animal fiber morphology and other details of the image
   a. Scales
   b. Medullary cells
   c. Fiber size, relative

F. Information concerning manufactured fiber morphology and other details of the image
   a. Longitudinal morphology
   b. Cross sectional shape
   c. Sign of elongation
   d. Delusterant

G. Degradation characteristics
   a. Axial split
   b. Brittle tensile fracture
   c. Ductile tensile fracture
   d. Flex fatigue
   e. Granular fracture
   f. Kinkband
   g. Shear crack
   h. Splitting
   i. Surface peeling
   j. Tensile fatigue
   k. Transverse crack
   l. Surface shear stress
   m. Other

The Glossary and Frequently asked Questions page is subdivided so that the viewer can readily locate the subject of interest: Plant Fiber Morphology, Comparative Plant Fiber Collection, Animal Fiber Morphology, Manufactured Fiber Morphology, and Microscopy and Image Capture Techniques. The Glossary document provides text and sample images of fiber microscopic features and explanation of microscopy techniques. Within each of these definitions, where appropriate, an image is provided which displays the feature being defined. Clicking on the image takes the viewer to that fiber’s collection so that images may be compared. Because images of degradation features are included with the word descriptions a visual dictionary is being created which should aid in standardizing descriptions of the consequences of degradation on fiber morphology.

The Resources page includes many references that can be used to find further information about fibers, as well as about fiber identification or microscopy techniques. The Search function is a Google type search; entry of a word will yield all collections that contain that word in their data fields. Contact information is provided for those who need additional help. The News page provides information on the most recently added files.

The How to Use FRIL page explains the basic components of the site, providing example sets of images. The Research page reports the publications and presentations related to the Fiber Reference Image Library. The Outreach page includes links to presentations that provide examples of the use of FRIL for public audiences and for students to engage them in learning about fibers and microscopy.
USES OF THE FIBER REFERENCE IMAGE LIBRARY

4. EXAMPLES OF THE USE OF THE FIBER REFERENCE IMAGE LIBRARY

The set of fiber images presented in each collection of FRIL supports the identification and characterization of the fiber under study. The example set of images shown in Figures 2-5 display a flax fiber examined using brightfield, darkfield, polarized light, and differential interference contrast techniques. The characteristic dislocations and narrow lumen are apparent, as are the deep polarization colors of this fiber. Figure 6 shows the fiber placed at extinction under crossed polars, and Figure 7 shows the same fiber with the First Order Red plate added to the optical train. The blue coloration at the cross marks and dislocations is indicative of the S direction of the fibrils in this fiber. Thus the set of images provides multiple pieces of data complementary to each other that aid in identifying the fiber as flax. The images can be used for comparative purposes; the conservator may compare her own fiber images to those on FRIL thereby obtaining support in her determination of the fiber’s identity. The conservator may also learn about a technique such as the Herzog and apply it to her own samples, adding a new technique that can be readily applied to a fiber being examined through microscopy. Because FRIL contains images of fibers obtained from historic garments, and these are linked to images of the garments themselves, examples of the use of FRIL in fiber identification are provided. For example, fibers obtained from a 1960s Chanel suit (HCT.1985.22.9a) (Figure 8) are identified as wool (Figure 9).

Figure 2 (top left): Flax fiber, Meltmount, RI 1.539, Brightfield. Figure 3 (top right): Flax fiber, Meltmount, RI 1.539, Darkfield. Figure 4 (bottom left): Flax fiber, Meltmount, RI 1.539, Polarized light. Figure 5 (bottom right): Flax fiber, Meltmount, RI 1.539, Differential interference contrast.
In addition, the combination of images of fibers obtained from historic garments linked to images of the garments themselves allows the conservator to view characteristic structures of aged fibers related to artifacts of a specific source and of a particular age. This may be useful in understanding fiber ageing and degradation. The axial split displayed by a silk fiber from a women’s gown (ca. 1770-1779) (HCT.1988.318.131ab) (Figure 10) is also linked to the glossary description of the term.
USES OF THE FIBER REFERENCE IMAGE LIBRARY

Figure 10: Silk fiber from a women’s gown, 1770-1779, Meltmount, RI 1.539, axial split.

Other users of the Fiber Reference Image Library include customs officers in their identification of imported fibrous objects, forensics agents in their identification of suspect fibers from crime scenes, textile scientists in their study of ageing of fibers, and teachers as they use microscopy and textiles to teach the arts, humanities, technology and science. Sections on the site provide some elementary information on microscopy techniques, with links to further information. Descriptions are posted of how the use of FRIL meets Ohio standards for education, particularly at the middle school level. For example, a file is provided which addresses the identification of the fibers from a 1989 Bob Mackie dress. Though one might assume that the dress was made of silk since it was a designer gown, examination of fibers, particularly those which have been decolorized with bleach, provides support for the identification as viscose rayon. The use of viscose for its draping quality as well as the depth of color to which it can be dyed is described, as is the technology of rayon production. Images of fashion garments are a “hook” which might engage young people in the art of fashion and the science of materials.

While not presently included in FRIL, another use for FRIL might be the investigation of the consequences of conservation treatment. Images of fibers from treated materials could be collected over time to monitor the success of the treatments employed.

5. CONCLUSIONS

While the McCrone Particle Atlas is available online (McCrone Associates 2011), the database is only available to subscribers and the images presented are not linked to artifacts of historic interest. No degradation features are noted, though these forms are important to the conservator as well as to the forensic scientist. The Atlas of Fibre Fracture and Damage to Textiles (Hearle et al 1998) provides an excellent set of images of degraded fibers, but only a limited number are related to garments of historic interest. Thus the Fiber Reference Image Library fills a gap in information necessary for those who study textile fibers.
KATHRYN A. JAKES

FRIL is a template for a much larger database, particularly if owners of collections create their own resident reference libraries and these ultimately are linked together by a larger entity. FRIL at OSU continues to grow, as we add images of fibers from historic garments from the HCTC and add images of more comparative plant, animal, and manufactured fibers. FRIL has been used by multiple researchers for comparative information including those who examine prehistoric fiber perishables and those who conserve paper. It has spurred others to think about accumulating comparative materials for identification in other applications. We have had requests to add more fibers including those from a customs office in Brazil and an engineer in Israel. Images from FRIL have been used in a book published by the Textile Museum in Tilburg, The Netherlands (Waart et al 2011).

ACKNOWLEDGMENTS
This publication was developed under a grant from the National Park Service and the National Center for Preservation Technology and Training. Its contents are solely the responsibility of the author and do not necessarily represent the official position or policies of the National Park Service or the National Center for Preservation Technology and Training.

The Ohio State University Historic Costume & Textiles Collection provided additional salaries and materials in support of the development of the Fiber Reference Image Library.

REFERENCES


USES OF THE FIBER REFERENCE IMAGE LIBRARY


SOURCES OF MATERIALS

Meltmount™
Cargille Laboratories
55 Commerce Rd.
Cedar Grove, NJ 07009 USA
Tel: (973)-239-6633
Fax: (973)-239-6096
Email: cargillelabs@aol.com
http://www.cargille.com/index.shtml

Permount™
Fisher Scientific
2000 Park Lane Drive
Pittsburgh, PA
15275
Tel: (800) 766-7000
Fax: (800) 926-1166

KATHRYN A. JAKES is a professor at the Ohio State University. Her research is focused on analytical methods for the examination of textile fibers, obtained from archaeological, historic, and contemporary materials. 245 Campbell Hall, 1787 Neil Avenue, Columbus, OH. 43210. kjakes@ehe.osu.edu.
ONLINE ACCESS TO AND PRESERVATION OF A MULTI-COMPONENT SKETCH COLLECTION

MARJORIE JONAS

ABSTRACT – In 1979, the Special Collections and FIT Archives at the Fashion Institute of Technology received a large collection of archival material from Bonnie Cashin, one of the most groundbreaking and successful American fashion designers of the 20th century. Since the donation of the collection, its catalogue information was too general to be helpful for researchers. In addition, its storage lacked good organization and archival housing, leading to superfluous handling during retrieval. To remedy this situation, head of Special Collections and FIT Archives Karen Cannell, conservation technologist at the Museum at FIT Marjorie Jonas, and associate chair of Fashion and Textile Studies Graduate Program at FIT Denyse Montegut partnered to develop a documentation system and preservation protocol for fashion sketches with associated textile materials. The resulting Excel finding aid was based on national and international standards to include 28 descriptive elements. The author explains each of these elements, including the use of hyperlinks to access images and condition reports. The physical condition of the collection’s sketchbooks is also discussed and a case study of an improved preservation scheme is presented. The project has provided an adaptable template and has contributed successfully to access and preservation of the collection.

1. INTRODUCTION

The Department of Special Collections and the FIT Archives (SPARC) at the Fashion Institute of Technology (FIT) Library comprises approximately 8,000 rare books, 547 serial titles, 240 manuscript collections, 100 linear feet of archives, more than 500,000 works of art on paper, and an unknown number of audiovisual items, and covers the subjects of fashion, fashion illustration, regional costume, dressmaking and tailoring, textile design, the textile industry, interior design, art and architecture, and decoration and ornament. Materials range from American and European fashion periodicals dating from 1805 to Max Meyer’s pen and ink watercolor sketches for high end ready-to-wear designers Chanel, Poiret, and Worth (Cannell 2011). For many years however, SPARC remained buried treasure. Access to the collections was very limited.

Among the highlights in this repository are close to 4,000 sketches of the Bonnie Cashin collection. Cashin was one of the most innovative and commercially successful designers of the twentieth century. During her sixty-plus year career she designed for Hollywood film, couture, and ready-to-wear (Lake 2010). She had a great ability to use design ideas and take inspiration from her extensive travels and sources far outside the fashion world.
ONLINE ACCESS TO AND PRESERVATION OF A MULTI-COMPONENT SKETCH COLLECTION

and is well known for her creative use of unusual textiles (Iverson 1999).

2. HISTORY OF THE COLLECTION

Most of Cashin’s original design sketches now at FIT were part of a larger collection reflecting the collaboration of Cashin and Philip Sills between 1952 and 1977. Cashin and Sills developed a unique partnership (Cashin 1962) resulting in the proliferation of leather fashions in a range of unusual colors and unconventional uses (Iverson 1999).

The property of Sills and Co. was divided among institutions after the business closed. The Costume Institute at the Metropolitan Museum of Art, The Museum of the City of New York, and The Brooklyn Museum have garments and swatches. Sills’ donation to the Museum at FIT in 1979 included garments, patterns, original and reproduced sketches, photographs, publicity and display materials, newspaper clippings, scrapbooks, and written records. The paper materials were accessioned into Special Collections in the FIT Library and 32 ensembles remain in the Museum at FIT Collection.

The author chose to bring to light the sketches of the Cashin collection by creating a finding aid as a thesis topic. These sketches with all their various components could be of interest to researchers – be they fashion historians and designers, textile designers, or paper and textile conservators - with far ranging purposes. The problem was getting the information about the sketches to these researchers.

3. ESTABLISHING TERMINOLOGY

Two examples of Cashin sketch pages can be seen in figure 1. On the left is Cashin’s design for her “Little Beetle” and a clipping showing her inspiration. Swatches are also attached to what will be called the design layer. On the right are two design layers, one laying over the other, with Cashin’s sketch for an “Intarsia” dress. Attached to the top design layer is a jersey swatch with multiple leather swatches taped to it.

Figure 1: Two Bonnie Cashin for Sills and Co. sketches. Left: “Little Beetle” suit for Fall 1964 shown with elements identified, 20 x 15 in., Bonnie Cashin for Sills and Co., box 15, no. 21V, Right: Cashin sketch of “intarsia” dress, Spring 1972, 20 x 15 in., Bonnie Cashin for Sills and Co., box 31, no. 6
MARJORIE JONAS

Developing terminology took the combined effort of head of Special Collections and FIT Archives Karen Can nell, associate chair of the Fashion and Textile Studies Graduate Program at FIT Denyse Montegut, and conservation technologist at the Museum at FIT Marjorie Jonas. A distinction was made in this sketch series between the intellectual information and the physical characteristics of the sketch page. A sketch or sketches refers to the design idea or intellectual concept. The item or page includes the support, design layer(s), and attachment(s), and refers to the physical properties of the objects (see fig. 1, left). The item or page includes the support or sketchbook page and the design layer where the design concept or sketch is made. Attached to this design layer is a newspaper clipping with swatches: leather and corduroy. The complete glossary for this sketch collection is available by clicking on the link in cell T4 in the Bonnie Cashin Sketch Series Finding Aid explained below.

4. THE FINDING AID

This model finding-aid is an Excel spreadsheet that allows for twenty-eight types of information to be conveyed on one page. The Bonnie Cashin Sketch Series Finding Aid (BCSSFA) is accessible through the main library catalog webpage.1 Table 1 shows an abbreviated portion of the finding aid.

---

1. The Bonnie Cashin Sketch Series Finding Aid is accessible through the Main Library Catalog page http://fit.sunyconnect.suny.edu:4690/F by entering ‘Bonnie Cashin’ in the search window, selecting ‘Yes’ for words adjacent, and clicking on ‘Go’. This will bring up Cashin’s catalog page. The entry for Bonnie Cashin Collection (currently item 6) provides the link to the spreadsheet under Collection/Call#.

Textile Specialty Group Postprints Volume 21, 2011
5. DOCUMENTATION AND DESCRIPTION STANDARDS

In 2008, as the newly hired head of Special Collections, Karen Cannell had many improvements in mind including the need for a standard format for documenting and describing the holdings in SC. She and the author agreed that current internationally and nationally established standards for conveying information about the material should be incorporated into the finding aid template. The General International Standard Archival Description (ISAD(G)) is the current archival description standard developed by the International Council on Archives. It is intended to provide “general guidance for the preparation of archival descriptions” and to “be used in conjunction with existing national standards.” The standards given by this organization are for 26 sets of information or descriptive elements. These elements allow for information to be recorded about archival materials at “every phase of their management, i.e., creation, appraisal, accessioning, conservation, and arrangement” (ISAD(G) 2000). The national standard for archival description used here in conjunction with ISAD(G) is Society of American Archivists’ Describing Archives: A Content Standard (DACS). This standard also provides 26 descriptive elements that correspond to the ISAD(G) standard (Society of American Archivists 2007). With these standards as a starting point a numbering system appropriate for Special Collections and the Cashin sketch series was developed.

6. EXPLANATION OF COLUMNS IN EXCEL OR RULES OF CONVENTION

The integrated ISAD(G) and DACS descriptive or documentation standards are arranged at the heads of 28 columns labeled A to Z, AA and AB. These read left to right at the top of the spreadsheet in roughly the order of importance to the researcher and archivist (see table 1 or BCSSFA). The unique to each object, reference code number is listed in the column furthest left, then the level of description, creator of the collection, followed by the title and date of the unit of description, etc. By the time a researcher reads the scope and content in column J, he or she will have seen at a glance whether the material in the collection suits his or her purposes.

6.1 REFERENCE CODE

The reference code (ISAD(G) 2000, 3.1.1) is a unique identifier and serves as the call number for the library staff. This code establishes the hierarchy in the levels of description. Reading from left to right the code gets more specific, moving further down in the levels of descriptions. Figure 2 diagrams the specific parts of the code.

![Reference Code Diagram](image)
6.2. ELEMENTS USED TO DESCRIBE THE UNITS OF DESCRIPTION

In column B are the names of the levels of units of description: collection, sub-group, series, box, folder, or item (see table 1). This establishes the context of the unit of description within the collection.

6.3 CREATOR

Column C shows the creator or collector. This is “the organization(s) or the individual(s) responsible for the creation, accumulation and maintenance” (ISAD(G) 2000, 3.2.1) of the materials in the unit of description. Cashin is the creator of this collection.

6.4 TITLE WITH DATES

Titles and dates are in column D. Besides the reference number, the concise way to identify the unit of description is the date and title. As often as possible the title is taken verbatim from the dates on the boxes or from the title of a sketch Cashin has named (table 2).

Table 2: Partial view of Bonnie Cashin Sketch Series Finding Aid, A60 –E65, showing the inclusion of Cashin’s original title in D62

6.5 EXTENT AND MEDIUM

Column E holds the extent and medium of the unit of description. Here the physical size of the unit of description in linear feet is recorded as well as the medium or media of the unit. For example, cell E125 in the Cashin spreadsheet indicates the linear feet, number of pages/items and number of sketches in box 26.
ONLINE ACCESS TO AND PRESERVATION OF A MULTI-COMPONENT SKETCH COLLECTION

6.6 BIOGRAPHICAL, ADMINISTRATIVE, AND ARCHIVAL HISTORY

Column F has the biographical history of the creator of the collection. Cashin’s biography (see table 1 or BCSSFA, F2) has personal information about her as it relates to this collection.

Column G has the administrative history. In this application, the administrative history of Sills and Co. is recorded with a concentration on the years working with Cashin (see table 1 or BCSSFA, G3).

The archival history is found in column H and is the provenance of the material. When, as in the case of this collection, the material was acquired directly from the creator, this information will appear in column I: Immediate Source of Acquisition and Transfer.

6.7 SCOPE AND CONTENTS

The cells in column J, a “summary of the scope (such as, [sic] time periods, geography) and content (such as documentary forms, subject matter, administrative processes) of the unit of description…” (ISAD(G) 2000, 3.3.1) include additional information about the intellectual and physical material that isn’t stated in the other columns (see table 1 or BCSSFA, J4). This is where the archivist can be somewhat creative and put in some pithy information.

With just the data in columns A through J the researcher will have a good idea if the collection is relevant. This can be accessed quickly by making a key word search.

6.8 IMAGE HYPERLINKS

When there is an image available, columns K, L, and M contain a hyperlink that links to the image (table 3). Column K gives you the full view of the sketch, column L shows a detail, and column M shows a detailed image of a swatch or swatches (fig. 3).

Figure 3: Three views of Cashin’s sketch of a poncho, Aug. 1970, 20 x 15 in., Bonnie Cashin for Sills and Co., box 29, no. 28V, showing full view, detail, and detail of swatches accessed through hyperlinks in BCSSFA cells K147, L147, and M147 respectively.
Table 3: Partial view of Bonnie Cashin Sketch Series Finding Aid, K135-M147, S135-T147, and W135-AB147, showing the inclusion of hyperlinks

6.8.1. EMBEDDING OF HYPERLINKS

Two types of files are embedded as hyperlinks in the Cashin Excel file: images as jpegs and documents as pdfs. The link address includes the prefix of the server, here http://www.gsfit.net/cashin, followed by the folder name (if any) and then the unique name of the image - in this case the reference code and a brief description. An example can be seen in cell K147 (table 3): http://www.gsfit.net/cashin/IG1/29_28V_poncho.jpg. It is best to be as concise as possible when naming these files.

In order to store hyperlinked data, server space is needed. In this case a program called FileZilla was used (fig. 4) with space provided by the Graduate Studies Department at FIT. Files and images are listed in the lower right frame of this page.
6.9 PHYSICAL CHARACTERISTICS AND TECHNICAL REQUIREMENTS

Column S identifies the physical characteristics and technical requirements of the material. Here the condition of the unit of description that may affect preservation of the material will be indicated, and any hardware required to access this material. This is also where a hyperlink can be clicked to see an image of condition reports made for items listed (see table 3).

7. STORAGE AND CONDITION OF SKETCHES BEFORE TREATMENT

The majority of Cashin’s sketches were stored in 19 sketchbooks and 15 boxes with photographs and written records interspersed. The shelving holding the collections was intended for books only, so much of the material hung off the shelves (fig 5). This made it difficult even to move in the aisle between the stacks, much less identify and remove material for study. Placement on the shelves in Special Collection stacks was not well ordered. Dates and storage systems were mixed.

Figure 5: Left: Shelving in Special Collections including boxed Cashin sketches during treatment. Right: Sills and Co. scrapbooks on Special Collections shelving.
7.1 SKETCHBOOKS

The 19 sketchbooks had plastic covers and were probably commercially available (fig. 6). The design layers were attached to the heavy-weight matt paper of the sketchbooks with brush-applied adhesive.

Figure 6: Bonnie Cashin for Sills and Co. Spring/Fall 1965 sketchbook before treatment.

Fifteen boxes contained sketches previously cut from sketchbooks similar to the 19 intact sketchbooks. These were generally in poorer condition. Since the boxes were smaller than the sketchbook pages the design layers were either removed from the page or the support page was cut to fit the box. The design layers which had been removed from the support page were vulnerable to distortion and sticking to adjacent pages, especially when swatches were attached (fig. 7).

Figure 7: Example of sketches previously removed from a sketchbook, bird’s eye and edge views. Bonnie Cashin for Sills and Co. sketch series, Fall 1965/ Spring 1966, box 20
ONLINE ACCESS TO AND PRESERVATION OF A MULTI-COMPONENT SKETCH COLLECTION

The sketch books which were still intact also had problems. Turning the pages within the sketchbook caused distortion of the pages especially near the binding. The irregular surfaces of the various components attached to the sketchbook pages would catch on each other as the pages were turned and sometimes loosen and detach due to the desiccated adhesive (fig. 8). Pages varied in thickness depending on how many design layers and attachments were adhered. Over time the pages of the sketchbooks eventually warped.

Figure 8: Open sketchbook before removal from binder, now in box 15. Bonnie Cashin for Sills and Co. sketch series, 1964

7.2 SKETCH PROPERTIES AND OVERALL CONDITION

After a few of the sketchbooks and previously boxed sketches had been reviewed, a general idea of condition problems became clear. A checklist of potential condition problems to look for in each of 100 sketches was set up and a template for recording the condition of the sketches was developed by the author with guidance from Denyne Montegut. The condition reports have information on the types of paper and other materials from which the item was made, as well as the drawing medium and fiber content of swatches (fig. 9). The condition of an item was stated in general terms using the standard for examining textiles set up by Lucy Commoner at a Conference at Harper’s Ferry Center in April 2003 (Commoner 2003). More detailed condition problems followed. These condition reports were saved as pdfs. and embedded as hyperlinks in the appropriate row in column S (see table 3).

An example of one of the most common condition problems is illustrated in figure 10. The adhesive, now desiccated and brown, migrated through to the sketch side of the page. Some of the suede swatches, having become very acidic, have transferred their colors and oils to the adjacent page. One can see the stains on one page correspond to the leather swatches on the other. It was apparent that some type of barrier between the pages would help to prevent the most common condition problems from worsening.
MARJORIE JONAS

Figure 9: Condition report for Cashin sketch of Liebes linen skirt and suede camisole, Aug. 1964.

Figure 10: Cashin sketch of a cape and photograph of a suede skirt, showing the acidic transfer of suede swatches on each to the paper of the other. Bonnie Cashin for Sills and Co. sketch series, Spring/ Fall 1958, box 8, folder 2, nos. 18 and 19

8. TREATMENT AND IMPROVED STORAGE

8.1 REMOVING PLASTIC COVERS AND BINDING FROM REMAINING SKETCHBOOKS

It was decided that the sketches still in the sketchbooks would be better stored in archival boxes without their plastic covers. The support pages of the sketchbook would remain intact. This would help to avoid the problems of the sketches previously removed from their binders. The binders were removed and the pages were placed in...
archival boxes. Pertinent information, now listed in the finding aid, was transferred to the boxes with temporary sticky-note labels.

8.2. PRESERVING THE SKETCHES WITHIN THE BOX

An interleaving material or a clear envelope of some inert material for each page would help to preserve the sketches. Melinex was a possibility but is expensive and prone to holding a static charge. Montegut suggested 3ml polyethylene bags which she had used previously for similar material. This proved to be the best solution (fig. 11).

Figure 11: Cashin sketch of hooded coat and skirt before treatment (left) and after treatment (right) with 3ml polyethylene envelope and swatch in separate Melinex cover. Bonnie Cashin for Sills and Co. sketch series, Fall 1967/Spring 1968, box 23, no. 8

Cashin sketches in box 23 were chosen from the 41 boxes currently housing the collection to be used as a prototype for preservation. This box was typical of the content and condition problems throughout the sketch series. At some point later, permanent archival labels were placed on each of the 41 sketch boxes (fig. 12).

Figure 12: Left: partial view of Cashin sketch boxes with permanent labels. Upper right: two Bonnie Cashin for Sills and Co. sketch boxes with permanent labels. Lower right: Example of Bonnie Cashin sketch series box label
9. LINKING RELATED OBJECTS

Column W holds related units of description in SC or elsewhere. Here is where objects in different archives and collections can be virtually linked. So, for example, when the museum has garments and Cashin’s related sketch can be viewed, the staff knows how to dress these garments properly (fig. 13).

Figure 13: Left: Cashin sketch of “Bloomers Away”, 20 x 15 in., Bonnie Cashin for Sills and Co. sketch series, Spring 1969, box 25, no. 17V. Right: Cashin black jersey bare mid-riff top with black, pink, and white check wool bloomers, Museum at FIT, accession #79.222.2B/C. By Thomas Synammon, courtesy Museum at FIT

9. CONCLUSION

This was a small initiative in the overall plan to improve access while prolonging the life of the materials in the Department of Special Collections and FIT Archive. The project is a work in progress. The Excel spreadsheet can be added to and improved upon as a finding aid when more or different information comes to light. The online finding aid has increased accessibility to an important sketch series while decreasing the chances of unnecessary handling. By having pertinent and detailed information about the series on one page, researchers may not have to view the material in person. It allows for keyword searches, embedding additional information, and even images via hyperlinks. This format can also virtually re-unite parts of collections now in other institutions. Protecting the Cashin sketchbook pages with polyethylene envelopes seems to be the optimal solution at this point-- the slight glare on the page being the only drawback.
ACKNOWLEDGEMENTS

The author would especially like to thank Karen Trivette Cannell for the inspiration and guidance through the entire project. Denyse Montegut, my advisor and mentor, introduced me to Bonnie Cashin’s work in a textile conservation class. She also edited and helped with the fiber identification and analysis for the project. Kathy Francis edited and was very supportive. Stephanie Lake, the foremost Bonnie Cashin scholar, laid the groundwork for research on anything I needed to know about Cashin and Cashin’s work. The all-important technical support was generously provided by Anton Baptiste. He enabled me to use the Fashion Institute of Technology Graduate Studies Dept. server space for the image and document hyperlinks in the Cashin Excel spreadsheet. Ariele Elia helped with re-formatting my Excel into Power Point and later into a Word document. The Museum at FIT sponsored me for the AIC presentation.

REFERENCES

Bonnie Cashin Sketch Series Finding Aid (BCSSFA). Dept. of Special Collections and FIT Archives, SUNY FIT Library, New York.


SOURCES OF MATERIALS

Gaylord Bros. Inc.
P. O. Box 4901
Syracuse, NY 13221-4901
1-800-448-6160
www.gaylord.com
MARJORIE JONAS

U-line
400 Boulder Drive
Breinigsville, PA 18031
1-800-958-5463
www.uline.com

MARJORIE JONAS is the assistant conservator at the Museum at the Fashion Institute of Technology (FIT). She has performed textile conservation work for the Museum of the City of New York, Cooper-Hewitt National Design Museum, New York Public Library of the Performing Arts (LPA), Putnam County Historical Society, Merchant’s House Museum and conservator Kathy Francis. She holds a MA from the Fashion and Textile Studies Graduate School at FIT. One of many Bonnie Cashin research projects done during her graduate studies was re-housing Cashin’s film sketches at LPA. Address: 220 East 10th St. #3R, New York, NY, 10003; marjoriej@nyc.rr.com

ADDENDUM

Just prior to the release of this publication the author was informed the server space, i.e. File Zilla would be no longer available as of April 20, 2012. The links would now reside in a Flicker site set up by the FIT library. All the urls in teh Cashin finding aid have been changed to reflect this.
RETAINING THE UNKNOWN:
ETHICAL CONSIDERATIONS AND TREATMENT OF A SOUTH AFRICAN BEADED TEXTILE

SARAH J. G. OWENS

ABSTRACT – In 2009, the author conserved a South African beaded textile belonging to Bristol City Museums and Art Gallery as part of a Master of Arts in Textile Conservation, at the Textile Conservation Centre (TCC), United Kingdom. The textile was examined, and its possible historical use researched. The impossibility in establishing definitely how the textile was used was paramount in formulating an ethical treatment proposal.

The conservation treatment involved stabilizing the textile and supporting the weight of the beadwork. The textile was surface cleaned and humidified to reduce creases. Stitch support was undertaken to secure loose fibers and support tears and holes. Areas of possible previous repairs and alterations, although unsightly, crudely executed, and difficult to interpret, were not altered. Ethics were paramount in the decision-making process to retain these areas. A storage mount was constructed, and recommendations for possible display made.

The aims of the treatment to stabilize the textile for storage and display were achieved. The project was beneficial in bringing to light ethical considerations in conservation treatments and the importance of providing for multiple future interpretations and ‘retaining the unknown.’

CONSERVAR LO DESCONOCIDO: CONSIDERACIONES ÉTICAS Y TRATAMIENTO DE UN TEJIDO SUDAFRICANO ADORNADO CON CUENTAS: RESUMEN – En 2009, la autora restauró un tejido sudafricano adornado con cuentas perteneciente a Bristol City Museums and Art Gallery como parte de una Maestría en Restauración Textil, del Textile Conservation Centre (TCC), Reino Unido. El tejido fue examinado y se investigó su posible uso histórico. La imposibilidad de determinar definitivamente cuánto se había utilizado el tejido fue de primordial importancia para formular una propuesta ética de tratamiento.

Para el tratamiento de restauración fue necesario estabilizar el tejido y sostener el peso del abalorio. Se limpió y humedeció la superficie textil para reducir los pliegues. Se realizaron puntadas de refuerzo para asegurar las fibras sueltas y las cuentas y ojales. No se modificaron las áreas donde posiblemente se efectuaron reparaciones y modificaciones anteriores, a pesar de haber sido realizadas de manera antiestética y tosca. La ética fue de primordial importancia en la toma de decisiones con respecto al tratamiento de esas áreas. Se construyó un soporte para su almacenaje y se hicieron recomendaciones con respecto a su posible exhibición.

Se cumplieron los objetivos del tratamiento para estabilizar el tejido para su almacenaje y exhibición. El proyecto sirvió para sacar a luz consideraciones éticas relativas a los tratamientos de restauración y la importancia de brindar múltiples interpretaciones futuras y “conservar lo desconocido”.

1. INTRODUCTION

The importance of ethics and the preeminence of reversibility are well recognized factors when making decisions about conservation treatments. Conservators should, however, also consider if the treatments proposed and executed allow for possible multiple interpretations. The conservation treatment of a South African beaded textile will be described to highlight the importance of this issue. The documentation and conservation of the textile was undertaken by the author in 2009 during the final semester of the Master of Arts in Textile Conservation, University of Southampton, at the Textile Conservation Centre, United Kingdom.
2. SOUTH AFRICAN BEADED TEXTILE

The beaded textile (fig. 1) was donated to the Ethnography and Foreign Archaeology Department at Bristol City Museums and Art Gallery, United Kingdom, in 1908. There are no available records detailing when it was collected. The only information available is that the textile is from South Africa, and on the basis of style, presumed to be from the Zulu people. During communication with the museum’s curator of Ethnography, the textile was described as a ‘wrap style’ skirt (Owens 2011).

![Figure 1: South African beaded textile before conservation treatment. 2009. Courtesy of Bristol Museums, Galleries and Archives, UK.](image)

3. DOCUMENTATION

The textile was examined, photographed, and documented before treatment. Figure 2. is a diagram of the textile, highlighting the key features. The textile measures 1030mm horizontally and 860mm in the vertical direction. The ground fabric is plain weave, probably indigo dyed cotton. Indigo is a vat dye and does not require the use of a mordant in the dyeing process (Balfour-Paul 2006). As part of the examination process the instrumental analytical technique of light microscopy was undertaken. The textile was examined using a Stemi 2000-CS stereomicroscope at 5.0x magnification. Additionally, small samples were removed from the reverse of the textile and were observed under a Stemi SV11 stereomicroscope. Light microscopy enabled examination to be undertaken at high magnifications, revealing features that are otherwise difficult to observe and identifying the fibers and materials used in the construction of the textile. Under magnification the warp and weft yarns of the woven fabric appear as bundles of staple cotton fibers. The fibers have been twisted in an S direction to form a continuous yarn in the process of spinning.
RETAINING THE UNKNOWN:
ETHICAL CONSIDERATIONS AND TREATMENT OF A SOUTH AFRICAN BEADED TEXTILE

3.1 BEADWORK

The textile is embellished with glass beads of varying dimensions. The beads have been stitched to the ground fabric using linen thread. There are six horizontal lines of light blue beads and one line of pink beads at the bottom edge (fig. 3). The blue and pink beads are 5mm in length and 4mm in width. Smaller red, white, and blue beads, 4mm in length by 3mm width, are stitched in ‘caterpillar’ shapes. These caterpillar shapes feature throughout and a circular shape of red and white beads is centrally positioned on the textile. Beads used in African beadwork are predominantly glass. Trade in glass beads started in the seventeenth century and has profoundly influenced the accessories and costume of southern Africa (Carey 1986).
4. CONDITION

The textile was in a fair condition. Figure 4 illustrates the main areas of degradation. There were prominent crease lines, probably caused by previous storage, and unidentified stains, possibly caused by previous use. The stains are still visible on the fabric. There were loose fibers and hairs on the fabric surface, which are potentially significant and may provide further background information. Certain areas in the fabric appear faded and discolored, particularly in comparison with the reverse of the textile. Light damage is a probable cause of the color fading and a contributing factor to the deterioration of the cotton fibers. There is a large discolored square shape in the bottom left corner of the textile, possibly caused by photo-oxidation when the textile was previously stored folded.

![Condition diagram of the South African beaded textile. 2009. Courtesy of Bristol Museums, Galleries and Archives, UK.](image)

The cotton fabric is the most problematic and deteriorated part of the textile. In some areas the cotton fibers have degraded and the warp and weft threads are broken or missing, creating holes and slits in the textile. This damage could indicate the presence of acidic products due to cellulose degradation, which could contribute to further degradation of the fibers and physical damage to the fabric. There were tears along both side edges, probably caused by mechanical action. The weight of the beads may be causing additional stress to the cotton fibers and be a contributing factor to the extent of the holes and tears in the textile.

4.1 POSSIBLE ALTERATIONS/REPAIRS

Along the upper edge of the textile (fig. 5) are stitches in black and dark cream cotton and in black wool. The stitching appears to be previous repair and/or alteration stitches, and is very crudely executed and disfiguring. In the top left corner there is also a fabric addition of brown twill weave cotton.
5. RESEARCH AND TREATMENT AIMS

As part of the documentation process special research, mainly literature based, was undertaken on African costumes. The aim of this research was to help understand how the textile may have been worn, the previous alterations, and the significance of this type of textile. To date, due to the lack of information available about this type of costume, it has not been possible to establish definitively how the textile was worn. Is the textile a wrap style skirt? The textile may have been worn wrapped around the waist or wrapped around another part of the wearer’s body. During this research a black and white image was discovered depicting two women wearing similar beaded textiles. The style, where the textile is wrapped around the wearer’s breasts, indicates the married status of the two women (Crabtree & Stallebrass 2002, 43). The clothing observed in the photograph certainly has similarities to this African textile and it is believed by the author that this textile was indeed worn as a wrap skirt, covering the breasts, to indicate the married status of the wearer. However, the textile may have actually been worn as a headdress, or draped over the wearer’s shoulders, or even used as a sling to carry a baby. The lack of available information and inconclusive findings about the textile and how it was worn had a direct influence on the chosen conservation treatments.

The treatment proposal was initially discussed with the museum’s curator of Ethnography and the museum’s textile conservator. From these discussions the aim of the treatment was formed. The object brief was to make the textile safe for long-term storage and possible short-term display. Appropriate information to aid the interpretation of the textile and wrapped position of the fabric is still to be confirmed. Without this prior knowledge, displaying the textile as a skirt wrapped around a three-dimensional mount at waist level may lead to misinterpretation. The main objective of the treatment therefore was to give overall stability to the textile and
main areas of deterioration and to pack safely for storage. The treatment was devised and executed to enable the textile to be displayed vertically in the future.

6. TREATMENT

6.1 CLEANING

Prior to further treatments the textile was surface cleaned using low-powered vacuum suction and a soft brush. The textile was surface cleaned to remove any loose particulate soiling that could cause damage by abrasion and because debris may catalyze further deterioration of the textile fiber and structure. Loose debris and fibers were manually removed with tweezers (fig. 6) and due to their potential significance were retained for possible future investigation. Wet and solvent cleaning were deemed inappropriate for this object due to the possible stress caused to the fibers by the weight of the beadwork and the possible evidential value of the staining on the textile.

Figure 6: Loose debris and fibers on the textile surface carefully being removed by the author, and retained for possible future analysis. 2009. Courtesy of Bristol Museums, Galleries and Archives, UK.

6.2 HUMIDIFICATION

Small fiber samples, taken from the ground fabric, were tested for dye bleeding. The results indicated that the dye was not water soluble and subsequently the textile underwent humidification treatment. A humidification chamber (fig. 7) was constructed allowing overall monitoring of the object. This treatment was successful in relaxing the textile fibers. Contact humidification was additionally undertaken to reduce the hard creases caused by previous folding. For more control the treatment was undertaken in small sections for ten minute intervals. One layer of “Sympatex”, a moisture permeable material, two layers of blotting paper (one wetted), and glass weights were used. These treatments successfully reduced the creasing in the textile and provided a smoother surface to aid stitched support.

Figure 7: Humidification chamber for the textile. 2009. Courtesy of Bristol Museums, Galleries and Archives, UK.
6.3 MATERIAL SELECTION FOR STITCHED TREATMENT

Stitched treatment was selected to support the vulnerable ground fabric and secure the loose threads. Cotton was chosen to create a ‘like for like’ treatment, where the support fabric will not create more stress to the textile fibers and will be sympathetic to the original structure. Stitched treatment (fig. 8) was undertaken in two stages, and involved a combination of patch and full support. Areas of loss, small holes, and tears in the textile were supported using appropriately dyed cotton support fabric. A full support was carried out to provide additional stability and in consideration of possible future display of the textile. Cotton voile was selected for the patch support, as the weave is more sympathetic to the textile’s plain weave ground fabric. Cotton lawn however, for reasons of strength, was selected to provide full support.

Initial stitch trials were undertaken on samples of cotton fabric using lines of laid and couched stitch with a variety of threads. These included cotton thread, silk filament, Gütermann’s 100% polyester “Skala”, and fine polyester threads pulled from “Stabiltex” fabric. The most appropriate thread was chosen specifically for the different types of support for reasons of strength, color, and visual appearance.
6.4 FABRIC DYEING

Samples of cotton voile and cotton lawn were dyed to match the color of the textile, using Ciba Geigy “Solophenyl” dyes. “Solophenyl” dyes are direct dyes, bonded to fibers by Van der Waals forces and hydrogen bonding (Textile Conservation Centre 2008). Prior to sample and bulk dyeing risk assessments were completed. During the dyeing process safety guidelines were implemented and protective clothing was worn (fig. 9). The full support fabric of cotton lawn was then bulk dyed using Ciba Geigy “Solophenyl” dyes. The blue color was selected from the samples and is a good overall shade and color match, particularly around the bottom edge of the textile. The dark shade of the support fabric was difficult to rinse completely, therefore “Cibafix ECO” was used as an after-treatment to improve the wet and rub fastness.
6.5 STITCHED SUPPORT

The small holes and tears in the textile were supported using the samples of dyed cotton voile. Three different colored samples of cotton voile were selected to match the various shades throughout the textile. Lines of laid and couched stitch and fine polyester threads pulled from “Stabiltex” fabric were used to secure the loose threads on the face of the textile. After undertaking the initial stitch trials, “Stabiltex” was selected for reasons of strength and because it provides a neat finish and sensitive color match. Figure 10 is a diagram of the stitched support on the front of the textile. The diagram illustrates the location of the laid and couched support stitches and the staggered lines of running stitches securing the full support on the reverse of the textile.

Herringbone stitches, using “Stabiltex” threads, were positioned on the reverse of the textile to secure the patches. The full support fabric of cotton lawn was positioned over the patches on the reverse of the textile. A small window was cut into the full support fabric to enable future viewing of the reverse of the textile and the beadwork stitching (fig. 12). The cotton lawn was stitched to the textile using staggered lines of running stitch with Gütermann’s 100% polyester “Skala” for strength. Around the edges of the textile and full support fabric, blind stitch, using Gütermann’s 100% polyester “Skala”, was executed to secure together the two layers of fabric. This stitch provides an almost invisible stitch and neat join (Grimm 1993). Figure 11 is a diagram of the stitched support on the reserve of the textile.
6.6 RETAINING THE UNKNOWN

The decision was made not to interfere with the possible alterations positioned along the upper edge of the textile and to support this area in such a way that evidence of presumed former use was not lost. A full support of nylon net was stitched along the upper front edge of the textile using Gütermann’s 100% polyester “Skala” for reasons of color and strength. On the reverse, patches of dyed nylon net were positioned and stitched in place to further stabilize the holes and areas of damage. Nylon net was selected as the support fabric along the upper edge because it was possible to position the fabric between the folds in the textile. Nylon net can also be neatly trimmed to shape and is very effective at encasing areas of loss without being visually distracting. This was particularly desirable around the areas which were difficult to interpret and areas of previous repairs and possible alterations. These previous repairs and alterations, although unsightly and crudely executed, were not removed. The upper edge of the textile is difficult to interpret but the large hole, slits, and alterations along the top edge may have been undertaken by the original wearer and are deemed part of the ‘object biography’ (Kopytoff 1986). For this reason the large hole, previous crude repairs, and possible alterations have been retained.

7. STORAGE/DISPLAY

Due to the weight of the beadwork and the possible stress this may put onto the textile fibers, the textile is presently stored flat, positioned on a handling board. The client wished the textile to be stored in the existing museum storage space. The dimensions of the storage drawer are slightly smaller than the textile therefore the top edge is folded to enable the textile to be positioned onto a slightly smaller board that fits into the drawer. The client’s wish to potentially display the textile, preferably as worn, meant that the textile was not stitched down to the board. As part of the conservation report, recommendations for storage and future display were supplied to the museum. This included recommending that the textile is displayed vertically for short-term exhibition purposes only. Due to the weight of the beads, the degradation of the ground fabric, and the inconclusive findings establishing how the textile was worn, it was suggested that the textile should be displayed for long-term exhibition on a flat recessed mount, positioned at a slight incline.
8. CONCLUSIONS

The condition of the textile after treatment is good and the aims of the treatment were achieved. Creasing has significantly reduced by the humidification treatments. The stitching trials were useful in selecting appropriate threads and stitches. The colors of the support fabrics match well to the color of the textile and the stitching is neat, effective, and unobtrusive (fig. 13 & fig. 14). Securing the loose threads has made the textile more stable and less vulnerable to future damage. Stress from the weight of the beads on the ground fabric has been alleviated by the full stitched support. The overall appearance and stability of the textile has been considerably improved by surface cleaning, humidification, and the stitched support treatments, making the textile more attractive for possible display. The full support to the reverse of the textile enables ties and/or Velcro to be positioned onto the support fabric. This will reduce the stress to the textile's woven fabric if in the future the textile is put on short-term vertical display.
SARAH J. G. OWENS

This project was extremely beneficial as a student project, not only for improving the author’s decision-making and treatment skills but also for expanding the way objects are thought about. This project highlights the importance of avoiding assumptions when presented with objects to document and conserve, and of allowing for possible multiple interpretations of an object when proposing conservation treatments and mount designs. Aspects learned from this project have continued to prove extremely beneficial, particularly while recently working at the National Museums Scotland on a variety of textiles from the museum’s World Culture collection.

Ethics were paramount in the decision-making process for this project. Areas which were difficult to interpret were unaltered. Consideration was placed upon the previous use of the textile, subsequently influencing the conservation treatment. The large hole, slits, and alterations along the upper edge of the textile (fig. 15), which may be a fundamental part of the costume, were encased in nylon net, therefore ‘retaining the unknown’.

Figure 15: Detail view of the area of possible alterations to the textile after stitched support. 2009. Courtesy of Bristol Museums, Galleries and Archives, UK.

ACKNOWLEDGEMENTS

Grateful acknowledgements go to Sue Giles, curator of Ethnography and Foreign Archaeology, Bristol City Museums and Art Gallery for her kind permission to conserve the South African beaded textile and to subsequently publish this paper. Thanks go to Frances Lennard, senior lecturer in Textile Conservation at University of Glasgow, for her continuing support.
RETAINING THE UNKNOWN:
ETHICAL CONSIDERATIONS AND TREATMENT OF A SOUTH AFRICAN BEADED TEXTILE

The author would like to acknowledge The Clothworkers’ Foundation, UK and The Arts and Heritage Research Council (AHRC), UK, for funding the MA in Textile Conservation. The Clothworkers’ Foundation, UK and The Anna Plowden Trust, UK, for their financial support towards attending the AIC 39th Annual Meeting in Philadelphia. The author would also like to take this opportunity to thank the AIC Textile Specialty Group (TSG) for selecting this paper to be presented during the conference.

REFERENCES


SARAH OWENS is currently an Andrew W. Mellon fellow at the Smithsonian National Museum of the American Indian (NMAI). She has a BA (Hons) in Textile/Fashion (1998) which led to her working as design studio manager for an Irish weaving mill. In 2009, she graduated with an MA in Textile Conservation from the Textile Conservation Centre, University of Southampton. Sarah has completed an internship at the Metropolitan Museum of Art and an Icon/Heritage Lottery Fund internship at the National Museums Scotland and The Scottish Conservation Studio. She has held conservation positions at the National Museums Scotland and Historic Royal Palaces. Address: Smithsonian Institution, National Museum of the American Indian, 4220 Silver Hill Road, Suitland, MD 20746-2863; sarahjgowens@hotmail.com.
ABSTRACT - In 2010, the author was charged with preparing a previously conserved 16th-century carpet fragment for display. The project offered an opportunity to review some of the principles of conservation and search for solutions within the changes in ideas and practices of conservation during the last 30 years. The carpet had been repaired extensively before acquisition, and those repairs not only diminished the artistic impression of the carpet but also caused physical distortion of its original structure. In order to reconstruct the areas where original structure was lost, most had been repaired with insertions taken either from other carpet(s) or from another part of the same carpet. The previous treatment in 1980 involved a reweaving technique after removing old repairs including insertions. An area was tested with the technique however the treatment was not completed. When the project was revisited in 2010, a treatment with limited intervention was sought: realignment, stabilization of weak or damaged areas, and preservation of repairs with insertions. While both these conservation treatments improved the aesthetic quality and physical stability of the carpet, the latter treatment responds to current practice by focusing on finding less intrusive solutions and acknowledging the historical value of old repairs.

1. INTRODUCTION

In 2010, the author was assigned the project to conserve a carpet fragment for The Metropolitan Museum of Art’s new galleries for the Arts of Arab Lands, Turkey, Iran, Central Asia, and Later South Asia, opening in October 2011. The aim of the project was to conserve the carpet fragment in a way that would be both aesthetically acceptable and physically stable for display in the environment of museum galleries. The challenge was working with the previous treatment performed in 1980 as well as with old repairs that existed at the time of the carpet’s acquisition. This poster shows the progression of ideas in conservation practice, comparing the different approaches to conservation treatment in 1980 and 2010.

2. CARPET FRAGMENT

2.1 OBJECT DESCRIPTION

The object is identified in the museum’s record as “A Persian Carpet Fragment with Cartouche Border” (MMA
CONSERVATION OF A SAFAVID PERSIAN CARPET FRAGMENT: TWO DIFFERENT APPROACHES TO TREATMENT IN 1980 AND 2010

1970.302.1). It is from Iran, Safavid period (1501–1722), late 16th century, in Herat style. The fragment measures 43 in. x 49 in. and was given to the Metropolitan Museum of Art in 1970 by Joseph V. McMullan. Although all four sides are cut, the design elements of its proper right side suggest that the carpet fragment had originally been located near the border of a carpet. Both warp and weft of the foundation of the carpet are silk. The warp is two Z-twist yarns plied in the S direction, woven in two levels. The weft is single yarn without twist, woven in three passes between pile knots. The pile weft is wool, two Z-twist yarns worked in pairs. The knots are asymmetrical and open to the left. They count approximately 6,700 knots per dm$^2$.

Figure 1: Overall image of the carpet upon acquisition. Joseph V. McMullan. 1965. Islamic Carpets. New York: Near Eastern Art Research Center, Inc. 67

2.2 CONDITION UPON ACQUISITION

In addition to the overall abrasion and wear, the carpet had many losses and tears, probably due to previous use. This damage had been extensively repaired before acquisition. These repairs not only diminished the artistic impression of the carpet but also caused physical distortion of its original structure (fig. 1). Because of those past extensive repairs, many kinds of traditional repair techniques can still be found in the textile: reknotting, reweaving, plugging or repair with insertion, embroidering, patching, over painting, etc. Closing up areas of loss without compensating for the missing parts caused noticeable distortion especially along the proper right side of the fragment (fig. 2). In order to reconstruct the areas where original structure was lost, most had been repaired with insertions taken either from other carpet(s), or from another part of the same carpet. A few other repairs had been made with reweaving using new foundation and pile.
3. CONSERVATION TREATMENT IN 1980

The first conservation treatment of the carpet was executed by Nobuko Kajitani in 1980. The treatment involved a reweaving technique, which was performed by a weaving studio outside of the Museum.

In order to compensate for the loss of original structure, an area (A) was chosen to test with reweaving technique (fig. 3). After removing this area’s previous repairs, the carpet was sent to Karekin Beshir Ltd., a weaving studio in New York City. The test result was so successful that three more areas (B, C, and D) were selected for further treatment with reweaving. Previous repairs were partially removed in those three areas, which helped the carpet to align better. Drawings were made as part of the plan to replace large insertions in those areas with rewoven designs (fig. 4). After the initial test, the full plan was not carried out and the carpet had been stored flat as if ‘a work in progress’ until it was revisited in 2010.
CONSERVATION OF A SAFAVID PERSIAN CARPET FRAGMENT:
TWO DIFFERENT APPROACHES TO TREATMENT IN 1980 AND 2010


4. CONSERVATION TREATMENT IN 2010

When the conservation of the carpet fragment was resumed for the new galleries, the primary concern in determining the treatment method was to find a way to conserve the textile with limited intervention: realigning, stabilizing weak or damaged areas, and preserving the insertions in repaired areas as well as its original elements. Another important consideration was the vertical display of the textile in the galleries with proper protection.

More in-depth examination and analysis were executed on the carpet structure and condition. Technical examination showed that most of the insertions used in previous repairs had structure identical with that of the original carpet. Previous repairs before 1980 were removed only when they caused distortion which either might lead to further damage from unnecessary tension or destroy the carpet’s original pattern design. Overall realignment of the carpet was achieved to some extent by releasing tightly sewn repair stitches, mostly in the areas of loss that had been closed up without compensation.

The carpet was stitched to an overall support of backing fabrics: tightly woven wool was chosen for its similar texture and color which matched the background color of the carpet and heavy cotton duck was chosen to add structural stability to all integrated layers. Fraying edges of the areas of loss or tear were secured to the backing by laid couching stitches. Loosely spun cotton embroidery thread was used in fifteen different colors to match the colors of the areas they secured (fig. 5). The backing support also allowed the carpet to hang vertically with attached webbing and Velcro at the top of the reverse side of the carpet. In the galleries, the hanging was attached to a support board, protected within a Plexiglas box, and hung on the wall. After its display in the galleries, it will be stored flat.
5. CONCLUSION

This project offered an opportunity to review some of the principles of conservation. Solutions were searched for considering the changes in ideas and practices of conservation, based on the research, analyses, and advancements that have been made in the field over the last 30 years. Both treatments in 1980 and 2010 improved the aesthetic quality and physical stability of the carpet. One of the current practices is focusing on finding less intrusive solutions while preserving the condition of a carpet as it is, in this case, acknowledging the historical value of old repairs.

ACKNOWLEDGEMENTS

This project was performed with the support and supervision of Florica Zaharia and Janina Poskrobko of the Department of Textile Conservation, The Metropolitan Museum of Art.

KISOOK SUH is assistant conservator in the Department of Textile Conservation at The Metropolitan Museum of Art. She has been working on various projects in the museum including preparing textiles for the new galleries for the Arts of Arab Lands, Turkey, Iran, Central Asia, and Later South Asia. She received her M.A. in Museum Studies from the Fashion Institute of Technology, State University of New York. She was awarded Andrew W. Mellon Conservation Fellowship with her research on East Asian embroideries. She was previously employed by the National Folk Museum of Korea for several conservation projects on costume and textiles from the Joseon dynasty. Address: The Metropolitan Museum of Art, 1000 Fifth Avenue, New York, NY 10028; kisook.suh@metmuseum.org