5-24-2023

"I'm Not Searching the Right Words": User Experience Searching Historic Clothing Collection Websites

Arden Kirkland

Monica Sklar
University of Georgia

Clare Sauro
Drexel University

Leon Wiebers
Loyola Marymount University

Sara Idacavage
University of Georgia

See next page for additional authors

Recommended Citation

Kirkland, Arden, Monica Sklar, Clare Sauro, Leon Wiebers, Sara Idacavage, and Julia Mun. 2023. "'I'm Not Searching the Right Words:' User Experience Searching Historic Clothing Collection Websites." The International Journal of the Inclusive Museum 16 (1): 119–46. https://doi.org/10.18848/1835-2014/CGP/v16i01/119-146.

“I’m Not Searching the Right Words”: User Experience Searching Historic Clothing Collection Websites

Description/Abstract

This study investigates the search processes of users accessing public websites representing historic clothing collections, examining where their searches are supported by the metadata in the collection databases and what factors could make their experience more inclusive. With IRB approval from four universities, we performed a recorded experiment with twenty adults: ten students of historic dress and ten fashion professionals. Four tasks included search scenarios and images representing diverse historic garments. Results indicate that both the descriptive metadata and search features on collection websites present challenges for the typical user search process. Users search for historical dress content the way they perform online shopping, relying on images, lay terms, and user-friendly search filters. Factors that influenced individual users’ experience included technology and ease of guessing, revealing a hesitation around international garments for fear of being culturally offensive if guessing incorrectly. Inconsistency of terminology used by different websites meant that even users who were familiar with professional clothing vocabulary faced challenges. Conclusions indicate a need for enhanced metadata, better use of international nomenclature standards, effective search filters, and basic images in databases. Furthermore, community involvement will improve public search tools and facilitate learning about different cultures.

Keywords

Digital Collections, Clothing, Metadata, Searchability, User Experience, Websites

Disciplines

Library and Information Science | Museum Studies

Additional Information

This manuscript was accepted for publication in The International Journal of the Inclusive Museum, available online on May 24, 2023: https://doi.org/10.18848/1835-2014/CGP/v16i01/119-146

Author(s)/Creator(s)

Arden Kirkland, Monica Sklar, Clare Sauro, Leon Wiebers, Sara Idacavage, and Julia Mun

This manuscript was accepted for publication in
The International Journal of the Inclusive Museum, available online on May 24, 2023:
https://doi.org/10.18848/1835-2014/CGP/v16i01/119-146

"I'm Not Searching the Right Words:" User Experience Searching Historic Clothing Collection Websites

Arden Kirkland [1], Syracuse University, USA
Monica Sklar, University of Georgia, USA
Clare Sauro, Drexel University, USA
Leon Wiebers, Loyola Marymount University, USA
Sara Idacavage, University of Georgia, USA
Julia Mun, University of Delaware, USA

Abstract: This research investigates the search processes of users accessing public websites representing historic clothing collections, examining where their searches are supported by the metadata in the collection databases, and what factors could make their experience more inclusive. With IRB approval from four universities, we performed a recorded experiment with twenty adults: ten students of historic dress and ten fashion professionals. Four tasks included search scenarios and images representing diverse historic garments. Results indicate both the descriptive metadata and search features on collection websites present challenges for the typical user search process. Users search for historical dress content the way they perform online shopping; relying on images, lay terms, and user-friendly search filters. Factors that influenced individual users' experience included technology and ease of guessing, revealing a hesitation around international garments for fear of being culturally offensive if guessing incorrectly. Inconsistency of terminology used by different websites meant that even users who were familiar with professional clothing vocabulary faced challenges. Conclusions indicate a need for enhanced metadata, better use of international nomenclature standards, effective search filters, and basic images in databases. Furthermore, community involvement will improve public search tools and facilitate learning about different cultures.

Keywords: Digital Collections, Clothing, Metadata, Searchability, User Experience, Websites

Introduction

> I'm not searching the right words, like maybe it's not embroidered and maybe it's not a tunic and maybe it's listed as orange, because I don't know why nothing is coming up. (P18 searching with the query "red tunic embroidered")

As part of an ongoing conversation about the challenges of websites used for collections of historic clothing, one of the authors asked the others to try a small experiment. She sent them three photos of clothing objects, representing three different cultures, from the online collection of a well-known museum. Could they find the objects using the museum's collection website, without knowing a title, ID number, or other context? They were surprised to find this task was much more difficult than they thought it would be. This led to a larger experiment and the scope of the current study: what information about historic clothing do museums share in their online collections, and how does that correspond to the user search process? For international objects, if one does not know what culture a garment is from or what it is called in that culture (like the Korean hanbok in Figure 1), how does one search for it?

[1] Corresponding Author: Arden Kirkland, 343 Hinds Hall, School of Information Studies, Syracuse University, Syracuse, NY 13244, USA. email: akirklan@syr.edu

ISSN: 1835-2014 (Print), ISSN: 1835-2022 (Online)
https://doi.org/########################## (Article)

Figure 1: Dress, Patterned Gauze With Screened Border, Korea, Gift Of Jerry Y. Rhee, Courtesy of the Goldstein Museum of Design, St. Paul, MN, US
Sources: Dress n.d.

This research asks if the ways that public-facing digital, historic, clothing collections are being built match the ways in which people search for items in these collections. If users of collection websites are not succeeding in their searches then, "the traditional objective of museums to collect, document, keep, research, and display tangible objects for public good, education, and access" (Melchior 2014, 2) is not being achieved online. What features would provide a better connection between user search goals and the ways these digital collections are produced? To answer this question, university students and clothing history professionals, including professors, researchers, and curators, were included in our study as the predominant users of online fashion collections.

Less than a third of all art museums in the United States have online collections that are publicly available (Beaudoin 2020) yet are receiving feedback from the public to provide digital access. Clothing collections have been especially limited by the daunting task of digitizing objects, requiring training in mounting, photography, and metadata (data that provides context for objects and makes records searchable). Furthermore, the time and cost involved in creating and maintaining a database is substantial (Marcketti et al. 2011; Stewart and Marcketti 2012; Marcketti and Gordon 2019). Larger institutions may have resources to accomplish this goal,

but even historically underfunded and understaffed university collections are expected to maintain an "easily navigable and fully accessible website" to be considered proficient (Marcketti and Gordon 2022, 174). The past decade has seen a "digital turn" with greater accessibility to historic costume and textile objects through digitization, impacting museums, archives, private collections, and alternative forms of clothing archives which emerged using online platforms such as Instagram and Tumblr (Franceschini 2019; Pecorari 2019; Peters 2019; Scaturro 2019; Pierson-Smith and Pierson-Smith 2020). The rise of smartphones and social media has changed expectations regarding online visibility and accessibility that have also blurred the definition of curation and research (Melchoir 2019). The Covid-19 pandemic exacerbated this trend.

This research supports the ongoing efforts by international clothing history scholarship and museum best practices to counteract Western colonization overtones. According to Becerra-Licha (2017, 90), "Digital archiving, moreover, invites archivists to revisit core assumptions about authorship and authority, about context and hierarchy, and about advocacy versus agency." We have seen this progress through the push for culturally sensitive, ethical, and inclusive descriptions (Drabinski 2008; Berry 2018; A4BLiP 2019; Northeastern University Library 2019; Cataloging Ethics Steering Committee 2021; Altman 2021; Frick and Proffitt 2022; Perera 2022) as well as increased use of the post-custodial approach (Ham 1981; Cook 2013). Exhibitions have been models for greater inclusion, but physical exhibitions have limited reach, and these efforts are transitory unless accompanied by an online surrogate or publication (Hertz 2022; Xepoleas and Hayflick 2022). Improved archival clothing digitization efforts can potentially create accessible and inclusive collections, databases, and websites. More user-friendly data means items can be better used and understood. Researchers need the ability to search and find materials about diverse cultures if they are to avoid the "racial plagiarism" described by Pham as a critical shift in thinking, away from a cultural appropriation / cultural appreciation binary (2017). Additionally, once the public has access and engagement with the content, they can also amend or correct it, furthering the improvement of archival records and use (Caswell 2014).

There is very little research regarding how users perform online searches in this field, and if users' queries are adequately satisfied, given the challenges of vocabulary. Some of these authors and colleagues are working to build a public, inter-institutional search portal of online clothing collections in the United States akin to those in related disciplines such as folklore and architecture, or in other regions such as Europeanafashion.eu (Martin and Vacca 2018; Melchior 2019). If collections can obtain a richer understanding of the end user search process, they can populate their databases and build their websites to achieve all parties' goals of access and usage.

Background Literature

Clothing Collections in the United States

According to *Clothing and Textile Collections in the United States* (Queen and Berger 2006), over 2,600 clothing and textile collections can be found in the United States. These collections are hosted by a variety of institutions. The study of clothing artifacts informs a wider understanding of culture, history, business, technology, and design. Thus, users who are searching these collections might be students, designers, cultural researchers, scientists, and the public. Furthermore, collections producing clothing exhibits are helping draw attention, funding, and audiences to institutions (Stewart and Marcketti 2012; Pinnock 2019). In a study of mission statements from dress and textile museums and collections, Stanciel et al. (2022, 7)

identified "commitment to preserving knowledge" and "commitment to education" as common themes.

Most clothing collections are facilitated on a modest budget with a small number of staff. Due to the traditionally low status of costume and textiles within museums, this is true even in larger and well-funded institutions (Pierson-Smith and Pierson-Smith 2020). Often the personnel do not have a web development background and are more oriented towards hands-on museum practice. The work of collections management teams can be less visible than curatorial work, and thus harder for administrators and even the public to recognize, leading to difficulties in receiving the budget, staff, and time required for projects like digitization (Lee and Cifor 2019).

Clothing Collection Websites and Digitization Efforts in the United States

Poor or confusing metadata and photography dramatically impact the quality of digital records and searchability. This has a negative impact on the "retrieval effectiveness" of previously entered descriptions by isolating accessibility to those familiar with the collection (Beaudoin 2020). Photographs of the garments are taken for numerous reasons (i.e., database enhancement, storage box identification, public relations, etc.). Photography is a significant obstacle to the digitization process. It, "necessitates a combination of curatorial research, knowledge of conservation practice, and contemporary display aesthetics" (Palmer 2008, 40).

Work and scholarship around digitizing clothing collections has been steadily increasing since the mid 1990's (Goodrum and Martin 1999; Zeng 1999; Kirkland et al. 2015). The skills, labor, and budget required to digitize a historic clothing collection and make it searchable are a complicated series of endeavors. However, consideration of user needs aligns the process with institutional goals and becomes more fundable.

User Experiences

Zeng's case study of metadata for historical fashion objects (1999) helps to frame the conversation regarding user experience, considering the wide variety of users of fashion collections, their needs, and the benefits of improved access through structured metadata. MacDonald (2015) created a rubric of multiple factors to understand what museum and user experience professionals prioritized. He concluded that digital collections should maximize engagement and therefore craft a positive experience for users.

A conclusion that Tasich and Villaespesa reached (2013) is that in terms of data, users relied on photographs when searching for information. Furthermore, they relied on a readily visible tagging system, indicating that visually engaging data is integral to the user experience. Shephard and Pookulangara (2020) found that student researchers used the internet as a tool to find quick information and were unlikely to seek out and use digital collections unless specifically instructed.

Standardizing Data Around Clothing

Nomenclature standards and metadata formats for describing historic clothing have largely focused on terms for describing the high level "type" of an object. For example, the "Vocabulary of Basic Terms for Cataloguing Costume" from the International Council of Museums Costume Committee (2011), or ICOM vocabulary, distinguishes between a "Dress," "Gown," or "Coat." The other standard vocabularies currently used most often by museum catalogers are the Art and Architecture Thesaurus (J. Paul Getty Trust 2000), known as AAT, and Nomenclature for Museum Cataloging (Canadian Heritage Information Network, American Association for State and Local History, and Parks Canada 2018), which utilize terminology

from print dictionaries such as Fairchild's Dictionary of Fashion, now in its 5th edition (Keiser and Tortora 2021). The Europeana Fashion Thesaurus (Van Steen 2015) also proposed many fashion terms to supplement the AAT.

For large collections, a work "type" alone is not enough to narrow a search for an object; for example, using the "Dresses" object type search filter at metmuseum.org leads to 6,370 results at this moment (Metropolitan Museum of Art n.d.). Prown (1982) emphasizes the importance of establishing the description of an object, as it serves as the foundation for understanding it. Many databases use a single catch-all description field to gather such details, written as free text with no features to support consistent use of terminology. Zeng explains the value of adding additional elements for better description of apparel items so that more aspects of the garment fabrication and silhouette are included (1999, 1203–4). The AAT does provide more specific terms to describe materials, techniques, and design features, and sometimes these are provided in distinct fields such as "Materials" or "Technique" following standards like Dublin Core (DCMI Usage Board 2020), VRA Core (Visual Resources Association 2014), and *Cataloging Cultural Objects* (Baca et al. 2006). However, even relatively straightforward components such as field labels differ across multiple institutions. In our study, information about where an object was from might be labeled as "Origin," "Place of Origin," "Place," "Place Name," or "Spatial Coverage."

Cultural Biases in the Representation of International Clothing in United States Collections

Museums frequently separate what is considered "ethnographic" or "folk" dress from what is considered "fashion." For example, the Metropolitan Museum of Art and the Victoria and Albert Museum are just two of many museums that collect "Asian dress" in the Asian art department rather than their costume collections (Fujikiya 2018; Kakō 1992). As curator Christine Checinska notes, this separation of nomenclature solidifies an already rigid "hierarchy" between Anglo-European and global clothing (Friedman 2020). One reason might be that the definition of fashion refers to the industry's rapid changes, influencing a fashion collection's choice to acquire garments, while culture or region-oriented collections collect clothing to represent traditional culture, or even the stereotypes of the culture, but not the fashion movements within modern culture (Lillethun, Welters, and Eicher 2012). Current clothing dictionaries and online vocabularies tend to segregate Anglo-European fashion industry terms from terms of international clothing and often have gendered connotations that are not universal. For instance, "dress" is defined as a garment for women and children (J. Paul Getty Trust 2021).

The inconsistency of descriptive data representing objects is especially problematic for international clothing within American collections, due to complex language choices for an item and catalogers' lack of expertise about specific cultures. For example, the first "top level" of description in the ICOM vocabulary (2011) is divided by gender and age, when this cannot inherently be applied to non-Western clothing. Prior to this study, paper author Sklar worked with archivist Katherine Hill McIntyre performing a small scale-digitization project on a private collection of Syrian artifacts, which has become a long-term preservation project (Sklar, Hill McIntyre, and Autry 2021). In that process, the "top-level" naming has become a point of challenge, and the Syrian garment known as a "thob" illustrates this issue (Figure 2). Labeling a thob as a "tunic," which is described in *The Dictionary of Fashion History* as a male, rarely female, "loose body garment of varying length" from the 9th to early 14th century (Cumming, Cunnington, and Cunnington 2010, 211) incorrectly assigns not only a gender, but also a chronological description. Another common term to define a "thob" could be "robe," which is defined in *The Dictionary of Fashion History* for men as "from the French meaning a gown; a term which came to be used for ceremonial wear. A secondary meaning was of a loose outer

garment later a more usual term for a dressing gown," while for women, was "Descriptive of a woman's dress consisting of an underdress or skirt with an over-dress; the skirt being open in front and usually long behind, but term was also loosely used for a gown," (Cumming, Cunnington, and Cunnington 2010, 174). These gendered definitions cannot fully define what a thob is without inducing Western conceptions of gender and periodization.

Figure 2: Palestinian Thob (Left), Raw Silk, Yarmook, Damascus, Syria, 1985, Courtesy of the Weiss-Amush Collection; Dress (Right), Cotton; Silk; Velvet; Metallic Thread, Palestine: Judaea Hills, Bethlehem, c. 1930-1939, Courtesy of the Henry Art Gallery, University of Washington, Seattle, WA, US, Gift of Jon and Virginia Stewart. *Sources: Palestinian Thob 1985; Dress (Woman's) c. 1930-1939*

In *The Dress Detective, A Practical Guide to Object-Based Research in Fashion*, fashion historians Mida and Kim (2015) provide question checklists to frame fashion research. However, the first questions are: "1a) What type of garment is it? 1b) Is the garment intended for: male, female, unisex?" Although question 1b assumes a more gender-neutral stance, the issue lies within identifying the "type" of clothing. A Syrian thob cannot be simply typified into a "dress" or a "tunic." Therefore, while methods exist for systematically attempting to capture data, they are not as effective for international garments in United States collections. Some clothing scholarship and references have used geographical or cultural categorizations, including *The Worldwide History of Dress* by Patricia Rieff Anawalt (2007), which categorizes clothing by region, all the while providing a vocabulary list for users to easily access. However, this approach can further silo individual cultures from inclusion in wider scholarship.

Scholarship around critical cataloging (Olson 2001; Nicholson and Seale 2018) can be applied to collections, particularly to examine the ways that dress collections have been described with a colonial bias. Perera's (2020) survey of description specialists highlights the need for ongoing professional development to equip catalogers to participate in inclusive description initiatives. These are starting places for international clothing collections to provide approachable language.

Method

For the current study, data was collected with IRB approval from four universities: the University of Georgia, Loyola Marymount Los Angeles, Syracuse University, and Drexel University. The participants were ten university students above the age of eighteen (a mix of undergraduate and graduate level) and ten fashion professionals in the fields of design or museum collections. The students came from "history of dress/fashion" courses taught by the authors from the University of Georgia and Drexel University. The University of Georgia students' course is part of a Textiles, Merchandising, and Interiors program within the College of Family and Consumer Sciences, while the Drexel students' course was housed within a department of Art History from the College of Media Arts and Design. The professionals were found through a call for participants on the electronic listserv of the Costume Society of America and a sample of colleagues known to the study authors. All participants provided informed consent.

Participants filled out a brief survey about their prior experience with similar online searching and then scheduled a time to meet with a study facilitator (one of the authors) via Zoom. The facilitator helped participants understand the process and instructed them to share their screen so that both their screen sharing and their audio were recorded to video (but not their webcam). Authors did not have participants clear their cache or cookies in order to replicate a realistic search that they might perform, as it is unlikely that participants would do this on their own.

To begin the experiment, a link to a Qualtrics survey was sent to each participant, which showed them images of historic clothing artifacts. They were prompted to choose from two different scenarios in which they would search online for objects similar to one shown in a photograph provided:

- "Imagine that you have seen this photograph of an object online and you want to use it as the inspiration for a design project, but first you want to learn more about the context of similar objects, such as where and when they are from."
- "Imagine that you have been given this object, either personally (perhaps from a family member) or as a donation to a collection where you work (such as a museum, library, or archive) and you want to learn more about the context of similar objects,such as where and when they are from."

They were instructed to find out more about the item online while sharing their thought process verbally:

"Think out loud as you go. For example, you might:

- describe what you see in the image or questions you have about it
- explain why you enter certain words in a search
- say if certain search results are or aren't what you expected
- describe why you choose to click on one item versus others
- note anything you learn as you go"

For the first search (task one), participants were able to choose where or how to search, using any search engine or tool, and were prompted to stop after five minutes. After the participants expressed comfort and proficiency with the experiment, the facilitator assigned them to be "host" of the Zoom meeting and left the meeting to reduce potential discomfort that the participant may have as a result of them being watched while searching. The recorded

videos of their screens and related audio for all four tasks were then reviewed by the authors later.

For the second search (task two), participants were shown a garment that was similar to the first one (in terms of style, color, time period, place of origin, etc.) and given the URL for the online collection where the object is documented but not the page of the exact object. Participants tried to find that object in the online search portal of its home collection, again stopping after five minutes regardless of whether they had found the object. The pairing of similar objects allowed us to compare and contrast two different types of searches but for similar objects. The purpose was to first see how participants would approach a very open search, using any website or search engine of their choosing, with the facilitator first emphasizing that there was no particular "right" or "wrong" approach. But for task two, knowing that the database URL provided should lead them to the exact object shown (a "known object" search), we wanted to see how easy or hard it was for participants to find the object. The same process was repeated with a different pair of objects (tasks three and four), searching for five minutes each, amounting to a total of four searches conducted over the course of twenty minutes.

The Qualtrics survey software helped to assign the objects and the order of search to an even number of different participants, allowing all items to be searched for equally. We prepared four possible pairs of objects: early-20th century American gym suits, Texan "western-wear" ranch-style shirts, Syrian thobs, and South Korean hanbok. Every experiment was programmed to contain two United States objects and two international objects. These clothing items came from collections across the United States. Seven institutional collections and one private collection generously allowed us to use images of their objects for this study and shared their metadata with us to compare our participants' search queries with the terms used in their data. The collections were the Henry Art Gallery at the University of Washington, the Goldstein Museum of Design at the University of Minnesota, the Peabody Essex Museum in Salem, Massachusetts, the University of North Texas in Denton, Texas, the Cornell Fashion + Textile Collection, the Vermont Historical Society, the Vassar College Costume Collection, and the private Weiss-Amush Collection.

Data analysis was conducted by examining how participants interacted with the websites and search tools in the recordings both visually (watching their screens) and orally (what they shared out loud). We did not evaluate or critique any specific site visited by participants, but rather observed the words used by participants in their search queries, their use of different search features available on different sites, and their descriptions of their thought processes. To systematize the analysis, we developed a spreadsheet template for each analyst to record data while they watched each video. For the four search tasks that were given to each participant, researchers noted the object of the participant's search and entered individual rows with the exact text of each search query. They then noted the search type (simple keyword, advanced, or using filters), chose from tags for common issues, and added other descriptive notes. Transcripts from each video were automatically generated using the software program Otter.ai, and analysts also chose notable quotes from participants to copy and paste into the spreadsheet in the row for the relevant search query. Participants in this study are addressed as "P" and a numeric ID rather than their name.

To begin, the members of the analysis team met to go through one search recording together. After that, they all separately coded one other recording and then met again to debrief and confirm there was no confusion. At each of these steps, they refined the spreadsheet and added instructions and definitions into the spreadsheet template itself, all of which ensured inter-rater reliability. We also had two team members do data collection (as study facilitators) and three other different team members do data analysis to further reduce bias. The data was then analyzed for themes that developed. Each distinct search query was further analyzed, using a spreadsheet to split each query into distinct words, comparing each word to

the words in the metadata record for the object and color coding the cells to show which words matched or not (Figure 5).

Results & Discussion

Challenges of Finding Museum Objects in Commercial Search Engines

In our preliminary survey before the experiment tasks, participants indicated the sites they preferred to visit for costume research (Table 1), and out of the thirty-three different resources listed, the Metropolitan Museum of Art was tied with Google as the preferred resource. Other responses were Pinterest, the Victoria and Albert Museum website, the *Vogue* Archive, and "museum" and "auction" websites. Indeed, P05 said "I don't normally start with Google. I go to a collection first."

Table 1: Preliminary Survey: Sites Participants Use for Costume Research

Sites mentioned by participants	*Count of mentions*
Google	7
Metropolitan Museum of Art	7
Museum websites	5
Pinterest	4
Auction websites	3
Google scholar	3
V&A Museum	3
Vogue archives	3
FIT Museum	2
Google arts & culture	2
Google books	2
Google images	2
Archives at museums and universities	1
Artwork databases	1
Colonial Williamsburg	1
Costume Gallery website	1
Costume People group on Facebook	1
DAR	1

Fashion blogs	1
Fashion for bank robbers	1
Gallica	1
Getty	1
Historic clothing collections	1
Historical groups on Facebook	1
JSTOR	1
Libraries	1
Magazine archives like Vogue,Life,Look	1
NIH	1
NYPL	1
PMA	1
ShowStudio.com	1
Vintage clothing sites	1
Winterthur	1

Source: Kirkland

However, for tasks one and three (“cold” searches, when they were not directed to a particular site), 97.5% went to a commercial search engine first: 95% went to either Google or Google Images, including P05 (Figure 3). As P15 said: “Google is my default. It just is.” Since the scenario we gave them was one in which they needed to learn more about an unknown object, almost none of the participants were able to choose a single collection website to start their search. "I definitely feel a little bit lost trying to find something similar to it without knowing the period or the location," said P19. When faced with searching any number of individual museum websites with no guarantee of success (as opposed to searching in a single place using an engine like Google), our participants thought the latter was a better use of their time, especially considering the short duration of five minutes for each task. This emphasizes the need for museum websites to seriously consider the role of rich metadata in search engine optimization.

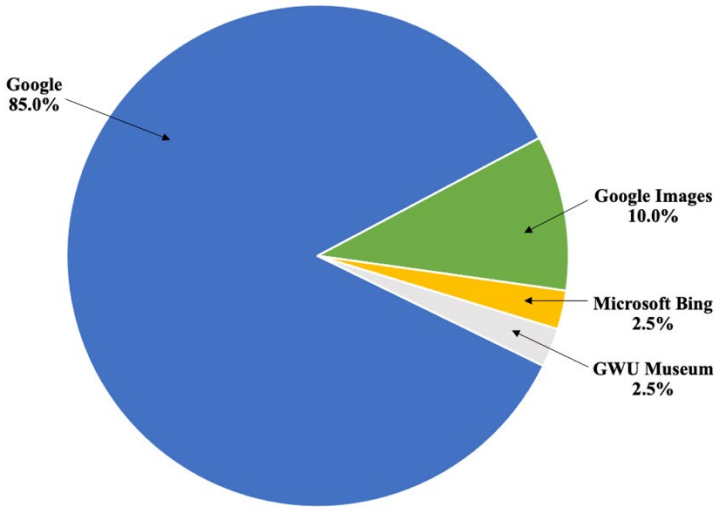

Figure 3: First Site Visited by Participants for Tasks 1 and 3
Source: Kirkland

Participants' search results were consistently dominated by current items from e-commerce, as with P07 who said: "I feel like the dress shown in the picture looks older and all these are more newer styles than that." Participants added words to their queries to try to remove fashion sites from their results, including "vintage," "museum," "retro," "historic," "historical," "history," "costume history," "costume collection," or "antique," but this strategy was rarely successful since these terms are not used by many museum websites. As P18 remarked, "the problem with searching for like vintage, especially from the last century, is that you just end up getting like Etsy or random shops that use vintage as a keyword and then you have to sort through that." The participants' vocabulary choices also showed different connotations in a commercial setting, as when P19's use of the term "gown" directed them to nightgowns and Christening gowns.

For the cold searches of tasks one and three, Pinterest often came up (Table 2). While five participants had included Pinterest in their list of preferred clothing research sites in their initial survey, others expressed dissatisfaction. P16 goes so far as to describe Pinterest as "a black hole." After P11 says "Oh great, it's on Pinterest. That's useless to me," they click on those results anyway, and their distrust is validated as all the links from Pinterest that should point back to the original source are broken. Only two participants (both students) searched directly and purposefully using Pinterest, without much success. Of the fifteen times that users commented on results pointing to Pinterest, they clicked on the links for only six results. While users expressed wanting to get away from e-commerce and Pinterest, many did not know what or where to search to accomplish this. While Sikarskie (2019) has successfully argued the validity of Pinterest as a research tool, this remains beyond the grasp of the typical researcher.

Table 2: Sites Visited by Participants for Tasks One and Three (Open Searches)

Site	*First site visited*	*Percent (out of 40 total searches)*	*All sites visited*	*Percent (out of 302 total queries)*
Google	34	85.00%	129	42.72%

Google images	4	10.00%	125	41.39%
Microsoft Bing	1	2.50%	4	1.32%
Subtotal of commercial search engines as first site visited	*39*	*97.5%*		
The Textile Museum / George Washington University Museum - museum.gwu.edu	1	2.50%	1	0.33%
Metropolitan Museum of Art			18	5.96%
Pinterest			12	3.97%
Google scholar			3	0.99%
V&A Museum			3	0.99%
Poshmark			2	0.66%
asianart.org			1	0.33%
ebay			1	0.33%
Google shopping			1	0.33%
Microsoft Bing Images			1	0.33%
nationalcowboymuseum.org			1	0.33%
Total	*40*		*302*	*100.00%*

Source: Kirkland

Influence of E-Commerce

All twenty participants indicated in our pre-study survey that they had prior personal or professional experience with online shopping, and many found it helpful to use online features that were familiar to them from their shopping experiences. Where options to search or browse focused on title, creator name, or date, this information was not as important for the clothing objects in our study as descriptive details. When museum websites do not provide such features, it impairs their objectives of access for education. Search filters provide an option to narrow their search results. For example, options to filter by size, color, or brand name increase confidence for searchers because options are only listed under the filters if they represent actual results. This contrasts strongly with participants' repeated attempts at phrasing search queries only to be disappointed in the results, especially when their use of retail terminology did not match the nomenclature in the record for an object.

Color was a descriptor that many participants included in their search queries, but it was not always present in the online record for the object. "I feel like if I didn't have a general idea of what the garment might even be or a name of somewhere to start, I think this would be kind of difficult to find just maybe saying because dress is a really broad term . . . maybe I'd search

for colors," said P10. P13 similarly expressed: "I always like starting with color. I feel like that helps a lot."

Nomenclature standards for colors are not used consistently in a single collection or across differing collections, as with the object shown in Figure 4, where the collection used the more nuanced term "maroon." However, all four participants who included color terms in their search query described it as "red," and therefore didn't get any search results. P10 commented, "I think general color terms might be more helpful than saying something like maroon, you could call it red and it might not show up." For another object, three participants searched for "pink," but the object was excluded from search results because it was described as "magenta." P13 noticed "magenta... that could have thrown off the pink that I was looking up." However, e-commerce sites typically avoid this issue by using a short list of simple rainbow colors as their choices in search filters, so that maroon and magenta are not even an option, only red and pink. Also, in the English language, color comes before the work type (i.e., "red shirt"), but in other languages, it can come after (i.e., "chemise rouge" in French), thus continuing to shift the search results.

Figure 4: Western Style Shirt, Maroon Wool, Dallas, Texas, United States, Gift of Lou Ann Zellers, Mid-20th Century, Courtesy of the Texas Fashion Collection, University of North Texas College of Visual Arts and Design, Photographer Megan DeSoto.
Sources: Frontex Irby Thompson Mid-20th Century

Google Images provided dynamic search suggestions related to culture, region, and time period, suggesting search terms or combinations that our participants had not considered. Six different participants chose to click on these related to at least one query, hoping they would be helpful. In almost all cases, these provided new vocabulary terms, though in many cases, they were not, in fact, related to the object being searched. For P15, this helped with vocabulary acquisition, offering "Korean hanbok" as a suggestion after they searched "Korean garment female."

Scrolling as a Search Technique

Our participants visually sorted through the waves of data they found by scrolling to see what might appear to match their needs. Some of the fashion professionals expressed they often used a photo as a starting point to see an item in person for design inspiration or heritage fact finding. Thus, they were looking to see if an item had enough facts visually or in text to elicit their interest in pursuing the item further. Many of the users in this study wanted to use image filters. P04 (and others) added the filter of "items with images only" within a single collection's website, and 41.39% of the open searches (tasks one and three, where we did not tell them where to search) for every participant were started with Google Images (Table 2).

When P13 searched for a Korean hanbok with the terms shown in Figure 5, the search was not successful. The shaded cells show that several of the terms did match with the metadata for the object but were always combined with other terms that did not match (not shaded). However, when this participant "gave up" and tried that site's function to show "random images," they did not mind scrolling, and got lucky, finding it in those results. P05, P08, P09, P13, P14, P16, P20 (balanced between students and professionals) all preferred to scroll through many pages of image search results rather than try to find better terms to narrow their results.

Query				
india	india			
child pink dress	child	pink	dress	
child pink dress india	child	pink	dress	india
pink yellow india	pink	yellow	india	
pink yellow middle east	pink	yellow	middle	east
pink yellow	pink	yellow		
pink yellow dress	pink	yellow	dress	

Figure 5: Color Coded Analysis of Search Queries by P13, With Shaded Cells Matching Terms in Artifact Metadata
Source: Kirkland

Trial and Error in the Search Process

Successful searches did not depend on whether participants were students or professionals, whether they were familiar with advanced search techniques like Boolean operators, or whether they rated their expertise highly. Participants' self-rating of expertise in the pre-survey did not always correlate directly with their success for the known object searches in the study. Some participants who had rated their expertise at "1" did succeed, while others who had rated their expertise at "5" did not.

For tasks two and four, participants were shown the photo of a known object and asked to find it on the institution's website, but only 43% of searches were successful (Table 3). Furthermore, only 25% of students were successful compared to 60% of professionals. We speculated this was related to use of advanced vocabulary, however, an examination of their search queries proved this to be incorrect. More importantly, they were comfortable with trial and error in their search process, and actively seeking out clues. This method helped them to determine a path, switch direction, or to learn new information (i.e., vocabulary) about the object in order to move their search forward. P17 said, "I'm going to say Eastern European first even though that's probably wrong." Others, such as P04 and P07, were comfortable guessing (Figure 6), while others were not.

Table 3: Success of Known Object Searches

Group	*Students*	*Professionals*	*All participants*
Number of participants	10	10	20
All known object tasks (Number)	20	20	40
All known object tasks (Percent)	100%	100%	100%
All found (number)	5	12	17
All found (percent)	25%	60%	43%
All known object tasks with American objects (Number)	10	10	20
American objects found (Number)	4	6	10
American objects found (Percent)	40%	60%	50%
All known object tasks with International objects (Number)	10	10	20
International objects found (Number)	1	6	7
International objects found (Percent)	10%	60%	35%

Source: Kirkland

Query					
chinese dress	chinese	dress			
long sleeve chinese dress	long	sleeve	chinese	dress	
black and red chinese dress	black	and	red	chinese	dress
african dresses for women	african	dresses	for	women	
long sleeve chinese dress	long	sleeve	chinese	dress	
indian dress	indian	dress			
cultural dress	cultural	dress			
cultural dress nepali	cultural	dress	nepali		
cultural dress	cultural	dress			
cultural dress sindhi	cultural	dress	sindhi		
sindhi dress	sindhi	dress			
cultural dress sindhi	cultural	dress	sindhi		
cultural dress sindhi pakistani	cultural	dress	sindhi	pakistani	

Figure 6: Color Coded Analysis of Search Queries by P07, With Shaded Cells Matching Terms in Artifact Metadata
Source: Kirkland

P05, P10, and P11, all professionals, took particular advantage of a variety of links throughout their search process to go off on tangents and learn more about the context of the garment, in some cases learning relevant vocabulary. P11, P12, and P16 clicked on links for Wikipedia that helped them to learn more about the culture of the unfamiliar, international garments. (While P10 did not do so, they mentioned that Wikipedia is often a helpful resource). For these participants, when they formed a new query, it was because they learned something from the previous that led them to conduct a new, different, or better query.

P13, P14, P20, P21, P03 (all students) hit a roadblock with incorrect terms related to culture but did not try to change it. Instead, they kept adding or changing other words (Figure 7). Rather than improving their results as they expected, adding more words muddled their findings further. Users grew frustrated that they did not know what words would generate a better search and sometimes felt they were moving farther away from their goal:

- P01: “I'm not really getting any closer but I don't know really what to change”
- P17: “maybe it isn't 60s And I have doomed myself from the start”
- P19: “too many words”

Query									
red geometric african dress	red	geometric	african	dress					
unisex red geometric african dress	unisex	red	geometric	african	dress				
unisex red geometric african dress	unisex	red	geometric	african	dress				
unisex red geometric tribal african dres	unisex	red	geometric	tribal	african	dress			
unisex red geometric tribal african tunic	unisex	red	geometric	tribal	african	tunic			
unisex red geometric tribal african long	unisex	red	geometric	tribal	african	long	tunic		
mens red geometric tribal african long t	mens	red	geometric	tribal	african	long	tunic		
mens red/black geometric tribal african	mens	red/black	geometric	tribal	african	long	tunic		
vintage mens red/black geometric triba	vintage	mens	red/black	geometric	tribal	african	long	tunic	
vintage mens red/black geometric triba	vintage	mens	red/black	geometric	tribal	african	long	tunic	

Figure 7: Color Coded Analysis of Search Queries by P03, With Shaded Cells Matching Terms in Artifact Metadata
Source: Kirkland

Users Expect Search Tools to Help Them More Than They Actually Do

Seemingly, the participants of the study wanted more functionality from museum websites that mirrored other search engines, like auto-correct or auto-suggest, Google's "Did you mean?", built-in cross-referencing, or intuitive relevance ranking for the "best" results to appear at the top. The search process at each individual website is different, so going to many individual museums to search is cumbersome. When advanced features are absent in website search tools, users who are not perfect typists or who do not know the spelling of a term are excluded from access to the educational resources of museum websites.

Many of our participants used a strategy of adding terms to their query when they needed to narrow down results, based on what they have come to expect from using Google. Many sites require Boolean search operators (using the words "and, or, not" or symbols for them) to narrow search results, but these are implemented in different ways by different websites. Instructions about this may not be explicitly provided by each website, or searchers do not stop to read them. At one website, a search for the query "child kimono pink yellow" resulted in 1,597 results, matching any of those words (a Boolean "OR" search), but following that website's syntax of "child AND kimono AND pink AND yellow" yielded no results. Instead of requiring such explicit Boolean operators, Google results typically put "AND" results at the top, with "OR" results further down. Many searchers have learned that putting multiple terms within quotes can help by turning the query into not only an "AND" search, but also as an exact match, in order. For some of our participants, this strategy backfired and excluded results that would have been successful without the quotes. P19 stated "it's hard to not be super specific and again the more words you seem to add the less relevant almost the search is at least image wise seem to get." P19's frustration suggests that adding more specific terms should make the search results more relevant.

"Fuzzy search" features in many search engines help to include close matches to the text of search queries, or to suggest "Did you mean?" like Google, but in this study we observed many sites did not have these features and required exact matches to get results. In some cases search engines will show evidence of cross-referencing (a search for "pants" might also get results for "trousers" or "slacks"), but most collection websites are not built with such cross-referencing in place. Some participants used "Western shirt" in their query for one of the objects in our study, which matched metadata and they got lucky. However, if they used "Cowboy shirt" instead, they were out of luck. If "Western shirt" and "Cowboy shirt" were acknowledged by the system as being related concepts using established thesauri, cross-referencing could help, but this was not evident with any of our search tasks. Most collections do not have the personnel in house to manually add relevant synonyms or related concepts into individual records, so this is a feature we must turn to system providers to implement in order to achieve our goals of access to our collections.

Pinterest only ended up being helpful for participant P11, who used reverse image search to find the exact image on Pinterest, along with a caption which provided helpful terms to include in their search. Participants found details of a garment or ensemble were just as important, if not more so, than trying to name the entire ensemble or garment. The most common action every searcher took was to include a work type in their query ("shirt," "dress," etc.) using American terminology. But this was not specific enough and generated too many search results. To narrow their results, participants tried to describe structural details; for example, searching for one of the gym suits, P17 referred to the square neckline and pleats (Figure 8). Similarly, after a search for "Korean garment female" led to results that were too broad, P15 said, "I'm going to add the brocade part in, add gold embroidery." Unfortunately, this was rarely helpful in our study, either because this level of detail was not included in the metadata on the website, or the searcher did not use the exact terminology that was entered.

Figure 8: Gym Uniform (left), Sleeveless Burgundy Jumper Dress, Barre City, Vermont, United States, 1920-1930, Courtesy of the Vermont Historical Society; Gray Gym Suit of Elizabeth Moffatt (left), Wool Field Hockey Uniform, United States, 1926-1930, Courtesy of the Vassar College Costume Collection
Sources: Gym Uniform 1920-1930; Gray Gym Suit of Elizabeth Moffatt 1926-1930

Users Have a Harder Time Searching for International Objects

Our research found that 50% of the known object searches for American objects were successful, while only 35% of the searches for international objects were (Figure 9). This was mainly because the participants in our study did not know the correct names for the international garments, how to translate those names to Western terms, or how to identify regional origin of the garments, and the images and filters did not provide enough clues for them. When participants did not know what culture or region a garment was from, they included casual retail terminology in their queries, such as “tribal,” “folk,” “cultural,” and “traditional.” Participants who recognized that the objects in their search tasks were from “Korea” or “Egypt” had better luck than those who tried a broader search for “Asian” or “African” (like P03, P07, P04, and P14) with no results, because the broader term was not explicitly entered in the object record or linked through a hierarchy. Therefore, when entering metadata for culture and region, it is important to include broader terms and hierarchies.

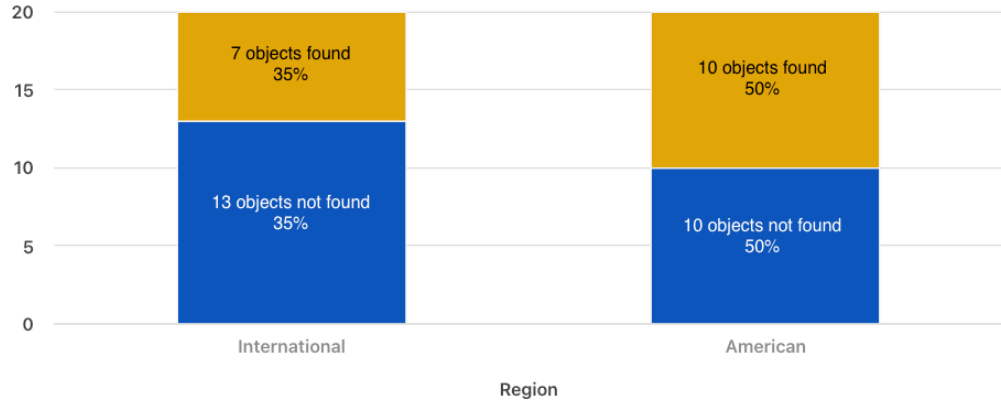

Figure 9: Success with Tasks Two and Four (Known Object Searches), Compared by Region
Source: Kirkland

P07 searched for "cultural dress" to "try to get an idea of exactly what culture this dress may have come from." Users are willing to search words like "culture" but less willing to narrow it down, and this points to issues around cultural sensitivity when inputting data and developing digital collections. Returning to the example shown in the table above, P13's use of terms for color, work type, and even culture was not successful. However, P10, P12, and P15 all had success with a single term, either "hanbok" or "Korean." This impacted the international search because one garment can have multiple terms associated with it, referring to silhouette or trends in different languages or cultures, and there were few instances where multiple terms were used, especially as the international garments are often relegated to "other" or "ethnic" and do not use silhouette terms from Western language.

Some participants stopped searching based on perceived cultural insensitivity. The contemporary social movements of Black Lives Matter, Me Too, and LGBTQIA+ have advocated for inclusion and sensitivity, and awareness has also grown in response to increased Anti-Semitism and of violence toward the AAPI community. This heightened thoughtfulness and responsiveness to cultural background had an impact on our results, as seen when P09 said, "I don't want to make any assumptions about what culture this is," and P18 said, "I don't want to say it's from a culture that it's not." The fact that they were being recorded may have impacted participants' willingness to perform these searches. We speculated this was generational; however, upon further analysis, the results were not so clearly matched to those demographic lines. This hesitancy impacted the international searches because multiple participants did not want to appear to be culturally insensitive by associating characteristics in a way that could be seen as stereotyping.

Professional and student users were both aware that naming conventions can change over time, particularly in regard to cultures or demographics, and it was unclear to them if and when databases and public websites employ timely changes. P15 said, "I understand what that means/is: 'empire;' but I think that it might be a problematic word these days, for this particular non-Western dress." Indeed, word choices are complex, as a user may want to use one within their familiarity or comfort zone, but the data may be reliant on a different term. This is not dissimilar to the nuances over what to call a work type (a garment) but adding a layer of sociological complexities. Overall, our findings highlight the importance of improving search capabilities so more users can access and engage with the content of online collections, along with better workflows for them to enrich or correct the data, all fostering a greater sense of inclusion.

Conclusions

This study demonstrated that while there is a great deal of effort being put towards the digitizing of historic clothing collections, there are numerous search issues that can impede a user's ability to engage with these resources, potentially negating these efforts. This research asked: How can collections bridge the communication gap between what is visible on websites, their metadata, and how users search? Improved success in these areas implements institutional missions for access, education, outreach, and diversity, as well as advances the goals of collections for increased inclusiveness and cultural visibility. We highlighted three areas for potential improvement going forward.

Digital Collections Need to Prioritize Inclusion

Collections can develop online search tools to meet varied users where they are. This experiment, with its "think-aloud" process, articulated common search patterns and ways of thinking, including whether users were reliant on Western biases in their own search language and what search functions they primarily used. Improving metadata and searchability activates usage of more items in a collection, including those of marginalized, international, or niche origins that have sometimes been relegated to "ethnic" or "other" in database records in the past. Current systems rely too much either on users having to learn how to use the specific search features and navigation of the site, or to have some understanding of a particular culture, region, or historic period before being able to perform a search related to it.

While catalogers may use clothing vocabulary coming from history, museology, patternmaking, fashion industry, theatrical costume, or other contexts, searchers may also look for objects using vocabulary from commercial settings or pop culture. Rather than preferring one term over another, many possible terms and hierarchies should be included and cross-referenced so that searches for one term will include results that are synonyms or closely related. For example, both culture and regional terms ("American, United States") should be included because people might search by either. Including "correct" period and cultural vocabulary along with simple, popular, and current vocabulary can help improve access. Furthermore, it can lead to vocabulary acquisition as users notice the new-to-them vocabulary on the pages of search results that match their initial queries. Such vocabulary acquisition, and related contextual information, leads not just to cultural awareness, but also to cultural sensitivity and respect. This aligns with contemporary social and cultural movements around diversity, equity, and inclusion, and breaks down hierarchies by using more words that represent multiple perspectives.

Filters And Facets Help with Vocabulary

Since users search like they shop for clothing online, and often do not know the discipline-specific vocabulary or cultural terms, the most helpful features were filters and facets. Users have become very familiar with the e-commerce model of filtering by color, size, or brand, and this can be applied to the metadata of historic garments. One of the sites for a known object search had search filters visible on every page, and eight out of nine participants took advantage of the search filters, choosing from provided options under filters for "neckline," "color," or "technique."

When unsure of what words to use in a search query, participants appreciated the option to choose from shorter lists of standardized terms. Such lists also can make it easier for catalogers to be consistent and thorough, and repeated use of such lists can help with vocabulary acquisition both for novice catalogers and for searchers. As a possible solution, paper author Kirkland has developed a system called Costume Core (2020), which provides an adaptable

structure for describing each specific detail that can provide a helpful filter, with dropdowns of vocabulary terms that are simplified for consistency but cross-referenced with standards that include synonyms from different cultures, periods, and languages, supporting the aforementioned missions and social movements.

Images Need Metadata and Search Engine Optimization

Since many of our users chose to exclude search results without images, collections should consider their workflows for photography. Most collections rightfully prioritize professional quality photographs with garments mounted on dress forms to show the proper silhouette, but these are very time-consuming and expensive to prepare, requiring significant expertise (Stewart and Marcketti 2012). While the resources to provide such photographs are beyond the means of many collections, the lack of photographs in an online collection impairs user access. This disconnect highlights the discrepancy between the traditionally slow pace of archival work and the expectation of immediacy online (Jenss 2019). Collections should consider including lower quality photographs (for example, garments shown on hangers or flat on a table), rather than taking a best-quality-or-nothing approach (Morena 2014). This can include amateur photographs, even using phones.

Even then, posting the image on a website is not enough to get it to appear in an image search engine like Google Images: accompanying descriptive metadata provides the keywords that increase search engine optimization. Many users rely on images as an important part of their search strategy and want to use reverse image search, but this functionality is limited. For example, it works sometimes with very specific silhouettes or colors, but many images are simply recognized as a "dress" and pull up unrelated items, especially current fashion items for sale. This emphasis on the visual search is also more inclusive since this preference often comes from a lack of knowledge of terminology (Sikarskie 2016).

Overall, this work is time and labor intensive, and while the authors have worked on other projects related to streamlining workflows, the most beneficial action is to increase budgets and personnel, including volunteers and community members.

For Further Research

As this research sheds light on challenges with the current structure and content of digital clothing collections, further research is warranted to explore specific issues in more detail or test specific solutions. Given the challenges of searching for museum items in commercial search engines like Google, work is needed to explore specific ways of filtering search engines for content from museums, or even a dedicated portal for historic clothing collections. Additionally, the mixed results for the participant who used reverse image searches show that this is an area for further study and improvement.

Knowledge gained from exhibition research and outreach are sometimes not input back into the database in a timely manner, and efforts to expedite that process would be beneficial to enriching metadata to improve search results. Documentation can be continuously improved during different interactions with garments when they are retrieved from storage. The clothing language choices shown in the terms used by searchers can be studied further and incorporated into the complex work of standardizing vocabulary around correct provenance, different fiber and fabric constructions, and differences in vocabulary between retail, sewing, historic, and other terms. Additional research on improved workflows for cataloging and photography are being performed by this research team and encouraged by others, including work with both public and private collections. Finally, more research to connect the academic, private, and nonprofit sectors with the more advanced commercial sector of database and UX functions would be highly beneficial.

REFERENCES

A4BLiP (Archives for Black Lives in Philadelphia's Anti-Racist Description Working Group). 2019. "Anti-Racist Description Resources." October 2019. https://archivesforblacklives.files.wordpress.com/2019/10/ardr_final.pdf.

Altman, Audrey. 2021. "Searching for Black Women in the Archives: Part 3." *Digital Public Library of America* (blog). February 18, 2021. https://dp.la/news/searching-for-black-women-in-the-archives-part-3.

Anawalt, Patricia Rieff. 2007. *The Worldwide History of Dress*. New York: Thames & Hudson.

Baca, Murtha, Patricia Harpring, Elisa Lanzi, Linda McRae, and Ann Whiteside, eds. 2006. *Cataloging Cultural Objects: A Guide to Describing Cultural Works and Their Images*. Chicago: American Library Association. https://vraweb.org/wp-content/uploads/2020/04/CatalogingCulturalObjectsFullv2.pdf.

Beaudoin, Joan. 2020. "Art Museum Collections Online: Extending Their Reach." *Museums and the Web,* 2020. https://mw20.museweb.net/paper/art-museum-collections-online-extending-their-reach/.

Becerra-Licha, Sofia. 2017. "Participatory and Post-Custodial Archives as Community Practice." *Educause Review* 52 (6): 90–91. https://er.educause.edu/articles/2017/10/participatory-and-post-custodial-archives-as-community-practice.

Berry, Dorothy. 2018. "Digitizing and Enhancing Description Across Collections to Make African American Materials More Discoverable on Umbra Search African American History." *The Design for Diversity Learning Toolkit*. August 2, 2018. https://des4div.library.northeastern.edu/digitizing-and-enhancing-description-across-collections-to-make-african-american-materials-more-discoverable-on-umbra-search-african-american-history/.

Canadian Heritage Information Network (CHIN), American Association for State and Local History (AASLH), and Parks Canada. 2018. "About Nomenclature." *Nomenclature for Museum Cataloging*. http://www.nomenclature.info/apropos-about.app?lang=en.

Caswell, Michelle. 2014. "Seeing Yourself in History: Community Archives and the Fight Against Symbolic Annihilation." *The Public Historian* 36 (4): 26–37. https://doi.org/10.1525/tph.2014.36.4.26.

Cataloging Ethics Steering Committee. 2021. "Cataloging Code of Ethics." Report. https://alair.ala.org/handle/11213/16716.

Cook, Terry. 2013. "Evidence, Memory, Identity, and Community: Four Shifting Archival Paradigms." *Archival Science* 13 (2–3): 95–120. https://doi.org/10.1007/s10502-012-9180-7.

Cumming, Valerie, C. Willett Cunnington, and Phillis Cunnington. 2010. *The Dictionary of Fashion History*. Oxford: Berg.

DCMI Usage Board. 2020. "DCMI Metadata Terms." Dublin Core Metadata Initiative. January 20, 2020. https://www.dublincore.org/specifications/dublin-core/dcmi-terms/.

Drabinski, Emily. 2008. "Teaching the Radical Catalog." In *Radical Cataloging: Essays at the Front*, edited by K. R. Roberto, 198–205. Jefferson, N.C.: MacFarland. http://www.emilydrabinski.com/wp-content/uploads/2012/06/drabinski_radcat.pdf.

Dress. n.d. Patterned Gauze With Screened Border. Goldstein Museum of Design, St. Paul, Minnesota. Accessed October 15, 2022. https://collection.goldstein.design.umn.edu/proficiowebmodule/JDetail.aspx?db=objects&dir=GOLDSTEIN&rID=1988.024.001a-b.

Dress, Jacket, Headdress and Purse. 1990-1999. Hanbok, traditional Korean woman's ensemble. Cornell Fashion + Textile Collection, Ithaca, New York. https://cornellfashion.pastperfectonline.com/webobject/2C60043E-E9F5-4AF5-A67A-849903991286.

Dress. c. 1930-1939. Cotton; Silk; Velvet; Metallic thread. Henry Art Gallery, University of Washington, Seattle, Washington, gift of Jon and Virginia Stewart. https://collections.henryart.org/detail.php?term=Palestin&module=objects&type=keyword&sortby=maker&sortdir=asc&x=0&y=0&kv=19352&record=16&module=objects.

Franceschini, Marta. 2019. "Navigating Fashion: On the Role of Digital Fashion Archives in the Preservation, Classification and Dissemination of Fashion Heritage." *Critical Studies in Fashion & Beauty* 10 (1): 69–90. https://doi.org/10.1386/csfb.10.1.69_1.

Frick, Rachel, and Merrilee Proffitt. 2022. "Reimagine Descriptive Workflows: A Community-Informed Agenda for Reparative and Inclusive Descriptive Practice." Dublin, OH: OCLC Research. https://doi.org/10.25333/WD4B-BS51.

Friedman, Vanessa. 2020. "The Incredible Whiteness of the Museum Fashion Collection." *The New York Times*, September 29, 2020, sec. Style. https://www.nytimes.com/2020/09/29/style/museums-fashion-racism.html.

Frontex Irby Thompson, Inc. Mid-20th Century. *Western Style Shirt*. Wool. UNT Texas Fashion Collection, Denton, Texas. https://digital.library.unt.edu/ark:/67531/metadc1639147/.

Fujikiya. 2018. *Kimono*. Victoria & Albert Museum East Asia Collection. https://collections.vam.ac.uk/item/O1438848/kimono-kimono/.

Goodrum, Abby A., and Kathi Martin. 1999. "Bringing Fashion Out of the Closet: Classification Structure for the Drexel Historic Costume Collection." *Bulletin of the American Society for Information Science* 25 (6). http://www.asis.org/Bulletin/Aug-99/goodrum_martin.html.

Gray Gym Suit of Elizabeth Moffatt. 1926-1930. Wool. Vassar College Costume Collection, Poughkeepsie, New York. https://vccc.vassarspaces.net/items/show/1244.

Gym Uniform. 1920-1930. Sleeveless burgundy jumper dress. Vermont Historical Society, Montpelier, Vermont. https://vermonthistory.org/catalog?folder=baebb890-406f-11eb-83a5-8f95902ce17d&search=Reset&entry=371baf40-5cfb-11eb-9c32-11b0b27833bc.

Ham, F. Gerald. 1981. "Archival Strategies for the Post-Custodial Era." *The American Archivist* 44 (3): 207–16. https://www.jstor.org/stable/40292404.

Hertz, Carrie. 2022. "This Is Not a Costume: (Re)Centering Community Interpretations of Dress in Museum Collections." *Museum Anthropology Review* 16 (1–2): 62–114. https://doi.org/10.14434/mar.v16i1.31694.

International Council of Museums Costume Committee. 2011. "Vocabulary of Basic Terms for Cataloguing Costume." 2011. http://terminology.collectionstrust.org.uk/ICOM-costume/.

J. Paul Getty Trust. 2000. "Art & Architecture Thesaurus Online." The Getty Research Institute. 2000. http://www.getty.edu/research/tools/vocabularies/aat/index.html.

———. 2021. "Dresses (Garments)." In *Art & Architecture Thesaurus*. http://vocab.getty.edu/page/aat/300046159.

Jenss, Heike. 2019. "Converging Practices: Fashion Exhibits across Museums and Social Media." *Critical Studies in Fashion & Beauty* 10 (1): 31–47. https://doi.org/10.1386/csfb.10.1.31_1.

Kakō, Moriguchi. 1992. "Kimono Rakuhoku." The Metropolitan Museum of Art. https://www.metmuseum.org/art/collection/search/659419.

Keiser, Sandra, and Phyllis G. Tortora. 2021. *The Fairchild Books Dictionary of Fashion*. 5th edition. New York: Fairchild Books.

Kirkland, Arden. 2020. "Costume Core Toolkit, Version 0.4." Costume Core. June 5, 2020. http://www.ardenkirkland.com/costumecore/version-0-4/.

Kirkland, Arden, Kathi Martin, Marlise Schoeny, Kiki Smith, and Gayle Strege. 2015. "Sharing Historic Costume Collections Online." *Dress* 41 (2): 107–27. https://doi.org/10.1080/03612112.2015.1130394.

Lee, Jamie Ann, and Marika Cifor. 2019. "Evidences, Implications, and Critical Interrogations of Neoliberalism in Information Studies: An Introduction." *Journal of Critical Library and Information Studies* 2 (1). https://doi.org/10.24242/jclis.v2i1.122.

Lillethun, Abby, Linda Welters, and Joanne B Eicher. 2012. "CSA Forum." *Dress* 38 (1): 75–97. https://doi.org/10.1179/0361211212Z.0000000005.

Macdonald, Craig. 2015. "Assessing the User Experience (UX) of Online Museum Collections: Perspectives from Design and Museum Professionals." In *Museums and the Web*, Chicago, IL, 2015. https://mw2015.museumsandtheweb.com/paper/assessing-the-user-experience-ux-of-online-museum-collections-perspectives-from-design-and-museum-professionals/.

Marcketti, Sara B., Janet E. Fitzpatrick, Carmen N. Keist, and Sara J. Kadolph. 2011. "University Historic Clothing Museums and Collections: Practices and Strategies." *Clothing and Textiles Research Journal* 29 (3): 248–62. https://doi.org/10.1177/0887302X11419361.

Marcketti, Sara B., and Jennifer Farley Gordon. 2022. "The Fashion and Textiles Collection Matrix: A Proposed Self-Assessment Tool." *Critical Studies in Fashion & Beauty* 13 (1): 167–83. https://doi.org/10.1386/csfb_00042_1.

Marcketti, Sara, and Jennifer F. Gordon. 2019. "'I Should Probably Know More:' Reasons for and Roadblocks to the Use of Historic University Collections in Teaching." *Journal of Conservation and Museum Studies* 17 (1): 2. https://doi.org/10.5334/jcms.169.

Martin, Marcella, and Federica Vacca. 2018. "Heritage Narratives in the Digital Era: How Digital Technologies Have Improved Approaches and Tools for Fashion Know-How, Traditions, and Memories." *Research Journal of Textile and Apparel* 22 (4): 335–51. https://doi.org/10.1108/RJTA-02-2018-0015.

Melchior, Marie Riegels. 2014. "Introduction: Understanding Fashion and Dress Museology." In *Fashion and Museums: Theory and Practice*. London: Bloomsbury Academic. http://www.bloomsburyfashioncentral.com.libezproxy2.syr.edu/bfccoll/encyclopedia-chapter.

———. 2019. "Digital Fashion Heritage: Understanding Europeanafashion.eu and the Google Cultural Institute's We Wear Culture." *Critical Studies in Fashion & Beauty* 10 (1): 49–68. https://doi.org/10.1386/csfb.10.1.49_1.

Metropolitan Museum of Art. n.d. "Search the Collection." The Metropolitan Museum of Art. Accessed September 18, 2022. https://www.metmuseum.org/art/collection/search.

Mida, Ingrid, and Alexandra Kim. 2015. *The Dress Detective: A Practical Guide to Object-Based Research in Fashion*. London, UK: Bloomsbury.

Morena, Jill. 2014. "The Digital Garment: Perspectives on the Image and the Museum Fashion Collection Database." *Fashion, Style & Popular Culture* 2 (1): 87–106. https://doi.org/10.1386/fspc.2.1.87_1.

Nicholson, Karen P., and Maura Seale, eds. 2018. *The Politics of Theory and the Practice of Critical Librarianship*. Sacramento, CA: Library Juice Press.

Northeastern University Library. 2019. "What Is This?" The Design for Diversity Learning Toolkit: Exploring Education and Advocacy for More Inclusive Information Systems. 2019. https://des4div.library.northeastern.edu/.

Olson, Hope A. 2001. "The Power to Name: Representation in Library Catalogs." *Signs* 26 (3): 639–68. http://www.jstor.org/stable/3175535.

Palestinian Thob. 1985. Raw silk. Weiss-Amush Collection.

Palmer, Alexandra. 2008. "Untouchable: Creating Desire and Knowledge in Museum Costume and Textile Exhibitions." *Fashion Theory* 12 (1): 31–63. https://doi.org/10.2752/175174108X268136.

Pecorari, Marco. 2019. "Fashion Archives, Museums and Collections in the Age of the Digital." *Critical Studies in Fashion & Beauty* 10 (1): 3–29. https://doi.org/10.1386/csfb.10.1.3_7.

Peirson-Smith, Anne, and Ben Peirson-Smith. 2020. "Fashion Archive Fervour: The Critical Role of Fashion Archives in Preserving, Curating, and Narrating Fashion." *Archives and Records* 41 (3): 274–98. https://doi.org/10.1080/23257962.2020.1813556.

Perera, Treshani. 2022. "Description Specialists and Inclusive Description Work and/or Initiatives—An Exploratory Study." *Cataloging & Classification Quarterly* 60 (5): 355–86. https://doi.org/10.1080/01639374.2022.2093301.

Peters, Lauren Downing. 2019. "A History of Fashion without Fashion: Recovering the Stout Body in the Digital Archive." *Critical Studies in Fashion & Beauty* 10 (1): 91–112. https://doi.org/10.1386/csfb.10.1.91_1.

Pham, Minh-Ha T. 2017. "Racial Plagiarism and Fashion." *QED: A Journal in GLBTQ Worldmaking* 4 (3): 67–80. https://muse.jhu.edu/pub/26/article/685711.

Pinnock, Olivia. 2019. "The Growing Popularity Of Fashion Exhibitions." *Forbes*, March 14, 2019. https://www.forbes.com/sites/oliviapinnock/2019/03/14/the-growing-popularity-of-fashion-exhibitions/.

Prown, Jules David. 1982. "Mind in Matter: An Introduction to Material Culture Theory and Method." *Winterthur Portfolio* 17 (1): 1–19. http://www.jstor.org/stable/1180761.

Queen, Sally, and Vicki L. Berger. 2006. *Clothing and Textile Collections in the United States: A CSA Guide*. Costume Society of America Series. Lubbock: Texas Tech University Press.

Red Ranch Style Shirt. Mid-20th century. Embroidered cotton. Peabody Essex Museum, Salem, Massachusetts.

Scaturro, Sarah. 2019. "Fashion as an Event: Conservation and Its Digital (Dis)Contents." *Critical Studies in Fashion & Beauty* 10 (1): 113–27. https://doi.org/10.1386/csfb.10.1.113_1.

Shephard, Arlesa J., and Sanjukta A. Pookulangara. 2020. "Student Use of University Digital Collections: The Role of Technology and Educators." *Museum Management and Curatorship* 35 (4): 392–408. https://doi.org/10.1080/09647775.2019.1638818.

Sikarskie, Amanda. 2020. *Digital Research Methods in Fashion and Textile Studies*. London New York Oxford New Delhi Sydney: Bloomsbury Visual Arts.

Sikarskie, Amanda Grace. 2016. *Textile Collections: Preservation, Access, Curation, and Interpretation in the Digital Age*. American Association for State and Local History Book Series. Lanham: Rowman & Littlefield.

Sklar, Monica, Katherine Hill McIntyre, and Sharon Autry. 2021. "Preserving Cultural Craft Heritage: Digitizing a Traditional Syrian Clothing Collection." *Craft Research* 12 (2): 317–33. https://doi.org/10.1386/crre_00055_1.

Stanciel, Ginger, Kelly L. Reddy-Best, Joshua D. Simon, Kyra G. Streck, Denise Green, Dyese Matthews, and Jennifer Gordon. 2022. "Radical Structural Change in North American Dress and Textile Museums and Collections: Critically Analyzing Social Justice, Oppression, and Empowerment." *Clothing and Textiles Research Journal*, October, 0887302X221132009. https://doi.org/10.1177/0887302X221132009.

Stewart, Tekara Shay, and Sara B. Marcketti. 2012. "Textiles, Dress, and Fashion Museum Website Development: Strategies and Practices." *Museum Management and Curatorship* 27 (5): 523–38. https://doi.org/10.1080/09647775.2012.738137.

Tasich, Tiana, and Elena Villaespesa. 2013. "Meeting the Real User: Evaluating the Usability of Tate's Website." In *Museums and the Web*, Portland, OR, 2013.

https://mw2013.museumsandtheweb.com/paper/meeting-the-real-user-evaluating-the-usability-of-tates-website/.

Van Steen, Nacha. 2015. "Europeana Fashion Thesaurus v1 Deliverable 2.3." Europeana. http://cordis.europa.eu/docs/projects/cnect/7/297167/080/deliverables/002-EuropeanaFashionDeliverable23EuropeanaFashionThesaurusv1.pdf.

Visual Resources Association. 2014. "VRA CORE - a Data Standard for the Description of Works of Visual Culture." VRA Core Official Web Site (Library of Congress). 2014. http://www.loc.gov/standards/vracore/.

Xepoleas, Lynda May, and Emily Hayflick. 2022. "Curating Costumes from Many Lands: Addressing the Colonial Gaze in Two University Dress Collections through Digital Curation." *Critical Studies in Fashion & Beauty* 13 (1): 21–43. https://doi.org/10.1386/csfb_00036_1.

Zeng, Marcia Lei. 1999. "Metadata Elements for Object Description and Representation: A Case Report from a Digitized Historical Fashion Collection Project." *Journal of the American Society for Information Science* 50 (13): 1193–1208. https://doi.org/10.1002/(SICI)1097-4571(1999)50:13<1193::AID-ASI5>3.0.CO;2-C.

ABOUT THE AUTHORS

Arden Kirkland, MSLIS, MFA: Adjunct Professor, School of Information Studies, Syracuse University, Syracuse, NY, USA

Monica Sklar, Ph.D.: Assistant Professor and Coordinator of the Historic Clothing and Textiles Collection, Textiles, Merchandising and Interiors, University of Georgia, Athens, GA, USA

Clare Sauro, MA: Assistant Professor and Director of the Robert and Penny Fox Historic Costume Collection, Antoinette Westphal College of Media Arts & Design, Drexel University, Philadelphia, PA, USA

Leon Wiebers, MFA: Professor of Costume Design, Chair of Theatre, Loyola Marymount University, Los Angeles, CA, USA.

Sara Idacavage: Textiles, Merchandising and Interiors, University of Georgia, Athens, GA, USA

Julia Mun: Art History, University of Delaware, Newark, DE, USA