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THE ST(AR) OF THE SHOW: EMBRACING AUGMENTED REALITY TO BUILD RELATIONSHIPS BETWEEN ARCHIVES AND RESEARCHERS

ABSTRACT

Purpose: Archives mean nothing if they are not accessible. Gaining access is challenged by myriad obstacles including something as basic as a misperception by potential users that archives repositories are elite environments meant only for high-level research. Similarly, technologies that could promote archives' accessibility and use can be costly and otherwise prohibitive to repositories and present yet more obstacles. In this paper, this writer will highlight various aspects of an archives-centric exhibition that is breaking down barriers of misperception and leveraging innovative yet employable technologies.

Method / Approach: This paper presents a case study approach regarding a specific repository in a public university setting plus an exploration of the relevant, scientific literature.

Conclusion / Findings: Thanks to tools such as Google Analytics, one can measure the success and reach of virtual exhibitions and with many points of measure. This exhibition will live on well beyond its prescribed mission with the goals of expansion and enhancement as future tools allow. Also, this writer wishes to combat the critical problem of the digital divide and explore ways to bring the content to traditionally less reachable communities.

Keywords: Online outreach; virtual exhibitions; innovative technologies; open-source technologies; fashion archives

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1 INTRODUCTION

Archives should not only be relevant to new and existing audiences but also entertaining with a goal of thorough engagement with expert researchers and novice visitors alike. As for this particular case, it all began in 2017 with a desire to commemorate the seventy-fifth anniversary of the Fashion Institute of Technology's (FIT) founding in 1944. It has always been a part of FIT's ethos to break down barriers and connect faculty and students to successful academic careers and professional endeavors and to connect with relevant industry professionals.

The College's mission today is much as it has always been; its mission statement reads as follows:

"FIT prepares students for professional excellence in design and business through rigorous and adaptable academic programs, experiential learning, and innovative partnerships. FIT fosters creativity, career focus, and a global perspective as it educates its students to embrace inclusiveness, sustainability, and a sense of community." (Fashion Institute of Technology, 2021a)

The primary question meant for this online exhibition to answer was how can we simultaneously honor our past while embracing the future? This writer decided to start at the root of the College's establishment, focusing on one of its two key founding partners, that being Max Meyer. Meyer was a principal of the women's cloak and suit manufacturer, Abraham Beller and Company, which was in operation from the 1890s until 1931. It was headquartered in New York City's historic Garment District, a neighbor of the FIT campus.

From the start, FIT has had a forever connection to relevant industries; Meyer embodied this tradition as he donated a business records archives of circa nine thousand Beller fashion sketches to the College in 1953. The records date from 1914 to 1929 (Fashion Institute of Technology, 2021d). Given the sketches' arresting beauty, rich information, and their tether to the College's

raison d'être, this writer wanted to leverage these archives both to support this specific effort and to further FIT's pedagogical mission which is always looking forward.

Further, this writer firmly believes that the key to breaking down many barriers begins with collaboration; as such, she knew that the unit she administers, the FIT Library's unit of Special Collections and College Archives (SPARC), could not accomplish all she wished to achieve on its own regarding such a large-scale project. Ultimately, she collaborated with an additional five units on the FIT campus, those being:

- Fashion and Textile Studies Master of Art Program
- Visual Presentation and Exhibition Design Bachelor of Art Program
- Communications and External Relations
- School of Art and Design Exhibition Space Managers
- Dtech Lab

Having virtually no budget, this writer knew she would need to leverage in-house FIT expertise for any meaningful result. In the end, nearly thirty-six participants contributed to the planning and execution of the project.

However, are virtual exhibitions, as a form of outreach, relevant and perhaps even critical to successful engagement with researchers? Below is an exploration of the scientific literature to discover answers to this question.

2 LITERATURE OR THEORETICAL BACKGROUND OVERVIEW

"Whether operating on-campus or remotely, the mission of SPARC remains the same: to foster original research across and beyond the FIT community by acquiring, preserving, and providing universal access to primary research materials including College archival records" (Fashion Institute of Technology, 2021b). Access comes in many forms, of course. Especially exciting forms are via today's online channels.

Online outreach via virtual exhibitions is not a new concept for archivists; while this is true, its development is ever-changing and ongoing. As early as 2012, Arjun Sabharwal discussed developmental paradigms for successful virtual exhibitions including the need for "accurate historical representation, adequate descriptions and navigation, and Web accessibility" (Sabharwal, 2012, pp. 11). Sabharwal continues to state prophetically that while at the time, virtual exhibitions were not yet part of traditional archives practice, they held the promise to be "cost-effective ways for...institutions to provide access to various artifacts, cultural heritage collections, and historical knowledge to visitors in remote locations" (Sabharwal, 2012, pp. 9).

The concept is also discussed quite thoroughly in the 2013 paper by Emily A. Bowden entitled, "Archives Outreach in a Digital World: Promoting Digital Content Through Online Outreach Efforts." Almost a decade ago, Bowden commented that "online outreach efforts are increasingly important to the relevance of digital library and archives collections" (Bowden, 2013, Abstract). Relevance can be measured by many factors, not the least of which is how valuable archival content is to researcher interest. Little did Bowden and other archivists realize just how important such efforts would be less than ten years later during a global pandemic. What was an addendum to and growing trend in our archival practice became mission-critical almost overnight.

Outreach is defined by the Society of American Archivists (SAA) as "the process of identifying and providing services to constituencies with needs relevant to the repository's mission and tailoring services to meet those needs" (SAA, 2020a). Outreach might involve any of various methods of practice including and not limited to mounting exhibitions, conducting information literacy instruction, and engaging in collaborative programming.

Gemma Cattel goes further to say that "outreach is a vital component of any archive or library service's strategy, and this applies as much to digital archives created via digitisation as it does to physical ones" (Cattel, 2015).

Conceptually, outreach is adjacent to the notion of advocacy; SAA defines advocacy as "activities in which archivists and their allies engage to gain support for archival records, the institutions that manage these records, archivists, and the archives profession" (SAA, 2020b). Byreaching out to myriad constituencies, archivists have the added opportunity to cultivate support of many types beyond that of onsite visitorship and use of physical archival material.

Indeed, with the onset of the pandemic, many institutions found themselves also facing a new or exasperated economic crisis. Battle, Mobley, and Gilbert convincingly argue that "virtual outreach strategies are particularly crucial for these institutions at a time when operating budgets are often stagnant or shrinking, despite increasing demands for accessing greater and more diverse audiences" (Battle et al., 2016, pp. 35).

Cultural institutions, including archival repositories, must always be at the ready to employ ever more engaging technologies to cultivate a following of visitors and supporters, financial and otherwise. To achieve this goal, archivists must be willing to test and explore uncharted technological territories. It appears they have been doing just that. In

their chapter, "Experience Design for the Humanities: Activating Multiple Interpretations," Ruecker & Roberts-Smith (2017, pp. 3) stated that to *"enhance the experiences of their audiences, cultural and educational institutions have been leaders in adopting emerging technologies to provide context for the cultural content they offer."* This bodes well for both the institutions and their supporters, regardless of their physical proximity to one another.

As recently as February 2020, the importance of online advocacy and outreach was the subject of a substantive paper from the Consortium of Academic and Research Libraries of Illinois or CARLI; the paper entitled, *Guidelines for the Promotion of Digital Collections: Best Practices for Promotion and Marketing* focuses in-depth on social media outlets as means of digital archives promotion and outreach. What is especially valuable about this source is its emphasis on the audience(s) for various platforms and the sustainability of the tools themselves. CARLI also states an important point, that being, "attempting to promote all collections to a general audience on a single platform, however, is not the most effective approach" (CARLI, 2020, pp. 4). Therefore, employing multiple vehicles and considering their specific appeal to targeted audiences is recommended.

Even more recently, and right in the middle of the pandemic, Clerkin and Taylor note that physical inaccessibility gives closed institutions' digital apparatuses "a sudden, out-sized importance: seeking to maintain public access to their intellectual and collections resources, [cultural institutions] scrambled to go remote, relying on existing digital infrastructures, accelerating in-process digital projects, and trying new online behaviors" (Clerkin & Taylor, 2021, pp. 165).

3 RESEARCH DESIGN

The research design for this project was essentially a series of acts of intense self-study and reflection and a discovery and exploitation of internal-to-FIT expertise. Therefore, the case study approach seemed the most appropriate research design for this effort.

A case study is defined as "an intensive analysis of an individual unit (such as a person or community) stressing developmental factors in relation to environment." (Merriam-Webster Dictionary, 2021b).

The areas of expertise examined and subsequently required for the project included and were not limited to:

- Fashion history
- Exhibition design - physical
- Exhibition design - online
- Historical garment mounting
- Photography - 3D
- Digitization - rare materials
- Metadata creation
- Augmented reality

4 RESULTS

This effort was an exhaustive collaboration across six university units, nearly thirty-six participants, hundreds of archival resources, and fourteen historical garments. Thanks to tools such as Google Analytics, one can measure the success and reach of a virtual exhibition and with many points of measure. The exhibition lives on with the goals of expansion and enhancement as future tools allow. For example, this writer wishes to

incorporate animation properties that might attract even more and different visitors. This effort would be the result of a collaboration with students and professors in the FIT Illustration Department. Also, this writer wishes to combat the problem of the digital divide and explore ways to bring the content to traditionally less reachable communities.

5 DISCUSSION

5.1 PLAN A: A PHYSICAL INSTALLATION

An original endeavor to plan and install a physical exhibition on the FIT campus was sidelined with the onset of the pandemic. This onsite exhibition was always planned with digital components but as secondary rather than primary significance.

The setting for the physical exhibition was the Fred Pomerantz Art and Design Center Lobby located on-campus on West 27th street adjacent to the Garment District. This choice was not accidental, as the exhibition's location would reinforce the tether between the College and the fashion industry. The Pomerantz Lobby is a palatial space of glass and marble and most importantly, volume.

Fig. 1: The Fred Pomerantz Art and Design Center Lobby (Fashion Institute of Technology-SUNY)



The summer and fall of 2019 were very active seasons for planning the physical installation with an opening planned for late spring 2020, just as the seventy-fifth anniversary year would be coming to a close.

In all, two hundred illustrations were curated from the total 9000 archival sketches and selected by a dozen graduate students in the Fashion and Textiles Studies program as well as by four SPARC staff members. All two hundred items were digitized at very high resolution for maximum flexibility, which paid off enormously in the end.

Also from the Fashion and Textiles Studies program were selected fourteen historical garments from the thousands of specimens in the program's Garment Study Collection; these were curated by the same graduate students mentioned before. The goal was not to match specific garments to specific illustrations but rather to emphasize a similar decorative motif, silhouette, or occasion. The garments were however matched to illustrations regarding dates of creation.

Mounting historical garments is an art and science in and of itself. While the graduate students were developing such an expertise, this writer also engaged students and faculty from the FIT Visual Presentation and Exhibition Design undergraduate program, which also builds this particular skill set and others that were significant to this project. Also important was the program's inventory of mannequins, which can be quite expensive to procure.

With most of the planning for physical elements well underway, planners including this writer also considered and pursued digital components such as augmented reality and the use of large-scale monitor installations throughout the space to loop continuously all two hundred digitized fashion sketches to be offered at many times larger than their original dimensions.

5.2 PLAN B: A PANDEMIC PIVOT

In early 2020, the entire world went into shock as the World Health Organization declared that COVID-19 virus was indeed a global pandemic and New York City was an early epicenter. On 13 March 2020, the College closed nearly all operations and would remain primarily closed until August 2021.

However, it was not until four months later, in July 2020, that FIT administration ceased all planning for any physical installation due to the COVID-19 pandemic. While there was much valuable time lost along the way, it was without question the best and safest decision under such extreme circumstances.

5.3 WEB-BASED EXHIBITION TECHNOLOGY: OMEKA

Prior to the pandemic, the SPARC unit already employed an Omeka-supported online, digital content delivery space (Fashion Institute of Technology, 2021g). With the postponement of the aforementioned physical exhibition, I decided to push Omeka's limits with the installation of the exhibition ultimately entitled, *Max Meyer and A. Beller & Co.: Interpreting a Hidden History of NYC's Garment District* (Fashion Institute of Technology, 2021f).

According to its creators, "'Omeka' is a Swahili word meaning to display or layout wares; to speak out; to spread out; to unpack...it signifies the practices that Omeka helps its users to do with digital content and through building digital projects for online communities" (Corporation for Digital Scholarship, 2020).

Fig. 2: Screenshot of the Omeka-supported homepage for the online exhibition (Fashion Institute of Technology-SUNY)



From 27 February through 01 December 2020, online exhibition planners, designers, and contributors otherwise met on a weekly basis to consider all aspects of what the show should deliver to visitors, physical or virtual. This exhaustive virtual exhibition was launched on 07 December 2020. What is meant by exhaustive? With the aid of FIT faculty-librarian colleagues, Prof. Joseph Anderson and Prof. Miyo Sandlin, this writer requested as much performance as Omeka would allow for a complete, online exhibition experience.

As one navigates the exhibition, one finds an immersive online environment enhanced with augmented reality; it also will eventually offer 3D and animation components as well. The coat in Fig. 4 will be captured with 3D rendering technology via a series of sixty-four simultaneous cameras. This capture's resulting image will allow visitors to experience the coat fully in the round and from dozens of vantage points. Again, using augmented reality, one will be able to view the circa 1925 coat as if it were in the same space as the visitor. These technologies are discussed in more detail below.

5.4 AUGMENTED REALITY TECHNOLOGY: ZAPWORKS

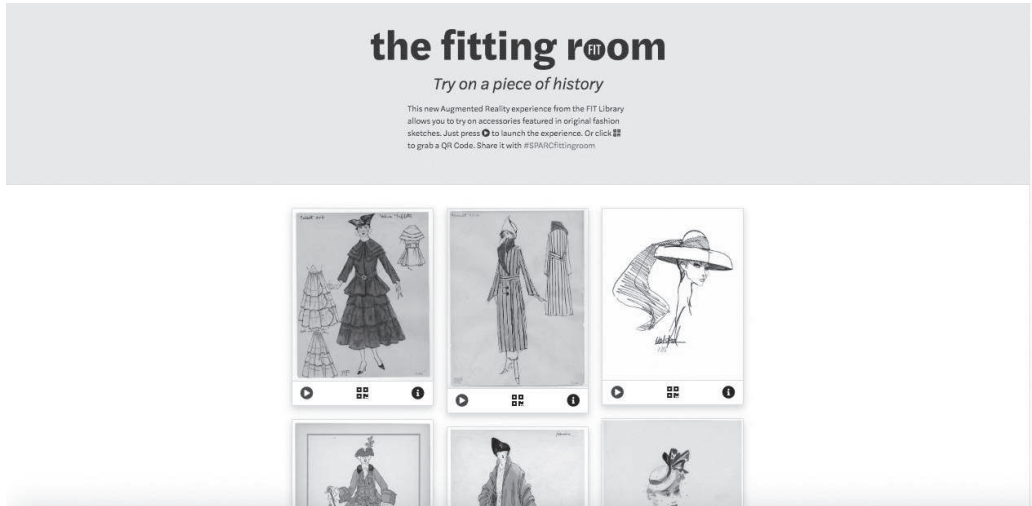
To augment is "to make [something] greater, more numerous, larger, or more intense;" to increase capacity (Merriam-Webster Dictionary, 2021a).

The FITting Room is an augmented reality (AR) experience that allows visitors virtually to "try on" rare and even unique holdings from the archival material my staff and I care for. The landingpage is seen in Fig. 3 below (Fashion Institute of Technology, 2021c).

Built using Zappar's ZapWorks Studio (ZapWorks, 2021) platform, this AR experience helps to bring historical source material nearly to life. Visitors can virtually try on accessories such as hats, scarves, and/or earrings, which are featured in FIT/SPARC original fashion sketches and illustrations by legendary artists.

ZapWorks Studio enables archivists and others “to create fully-customisable AR, VR and MR experiences across print, product, packaging, retail, events and much more.” (ZapWorks, 2021).

Fig. 3: Screenshot of FIT-SUNY FITting Room application landing page (Fashion Institute of Technology-SUNY)



Planners including this writer wanted to incorporate AR as it brings a passive exhibition experience into an active one. Built using Zappar’s ZapWorks Studio platform, the Fitting Room helps to bring historical source material nearly to life.

Zappar employs face filters, which are extremely popular on such platforms as Instagram and Snapchat especially among 18-25 year olds, which is the largest segment of the FIT student population.

According to Statista.com (Number of mobile augmented reality, 2021), “by 2024 there will be an estimated 1.7 billion mobile AR users worldwide, a rise of 1.5 billion from the 200 million seen in 2015. In 2022, there will be an estimated 1.1 billion mobile AR users worldwide.”

Ultimately, AR simply makes the online exhibition experience fun as it actively engages visitors. It also extends dramatically the use of what is truly unique to our collection: archival fashion drawings and illustrations.

5.5 3D-RENDERING TECHNOLOGY: 3DCOPYSYSTEMS

An even more sophisticated technology required me to engage with FIT’s DTech Lab. This lab is an extension of FIT’s Innovation Center; it is a true laboratory where FIT students, faculty, and external industry partners collaborate to advance new ideas, solve real-world problems, and inspire interdisciplinary research. Its mission is to partner with others, like this writer, using the most sophisticated and innovative technologies such as those found at 3dcopysystems (FIT, 2021e). The garment you see in Fig. 9 is one of fourteen featured garments in the online SPARC Digital exhibition mentioned earlier.

Fig. 4: Evening Coat, circa 1925, European or American, silk, metallic thread embroidery, School of Graduate Studies, Department of Fashion and Textile Studies, Garment Study Collection, F.2016.16, FIT (D. Paterson, 2020)



The Big ALICE studio is the largest photogrammetric object-capturing mechanism of 3Dcopysystems' product catalogue (3Dcopysystems, 2021). All told, the studio consists of sixty-four individual cameras; it provides not only enough space for up to six people, should your project require such capacity, but also it offers an extremely high resolution of capture. High resolution helps to ensure a high quality of any associated texture, which plays a very important role in capturing textiles and delivering extraordinary and realistic results.

Fig. 5: Image of the Big ALICE studio (3Dcopysystems, 2021)



Ultimately, the coat's 3D file will be embedded within the online exhibition space for a full, in-the-round experience of the garment for visitors.

Fig. 6: Screenshot of the 3-D rendered coat via Sketchfab software (Fashion Institute of Technology-SUNY)



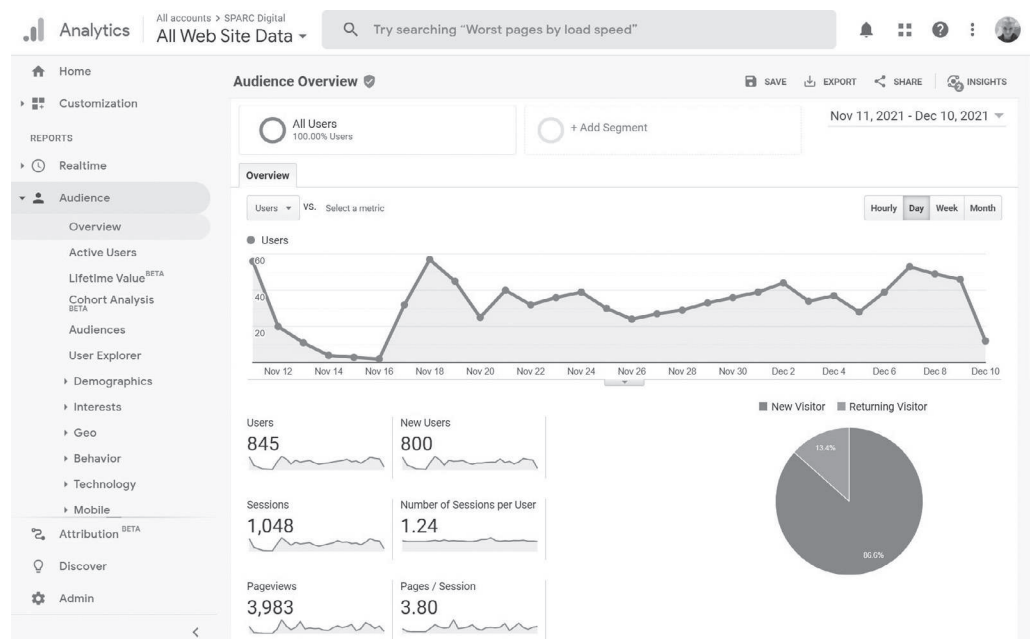
Again, it is one of 14 garments featured in the Meyer/Beller exhibition. This capture's resulting image seen in Fig. 6 will allow visitors to experience the coat fully in the round and from dozens of vantage points. Again, using augmented reality, one will be able to view the 1925 coat as if it were in the same space as the visitor.

5.6 ASSESSMENT OPPORTUNITIES

While it is clear that virtual and/or online exhibitions are now mission-critical for archival repositories, it is not enough simply to reach out; archivists can make their best effort day and night but to what effect? Archivists must also gauge the success and effectiveness of their efforts. Because of the sophistication of certain platforms, varied and detailed analysis can be cultivated by using analytical mechanisms inherent to online outreach tools.

At FIT, we are able to analyze visitorship to our Omeka-hosted exhibitions via Google Analytics (GA). GA can be manipulated in dozens of ways to display a variety of data that can inform the success of future decision-making. This is but one true mission of archives-based research.

Fig. 9: Screenshot of Google Analytics re: SPARC Digital sample capture (Fashion Institute of Technology-SUNY)



6 CONCLUSIONS

Early in this writer's career as an archivist, she adopted a mantra; it is a quote from the 1921 book, *Howards End*, by the English writer E.M. Forster. Forster declares, "Only connect! That was the whole of her sermon. Only connect the prose and the passion, and both will be exalted, and human love will be seen at its height. Live in fragments no longer."²

² The entire quote reads, "Only connect! That was the whole of her sermon. Only connect the prose and the passion, and both will be exalted, and human love will be seen at its height. Live in fragments no longer. Only connect, and the beast and the monk, robbed of the isolation that is life to either, will die."

If there is one lesson to learn from COVID-19, then it is to leverage not only multiple, on-line vehicles, platforms, and channels but also internal sources of relevant expertise to effectively promote the archives in our care, to sustain interest in them, and to connect successfully to our desired audiences.

The Meyer/Beller exhibition's future animation component has the potential to draw an even younger and more novice audience to the joys of exploring archival records and in truly dynamic ways.

One of the most urgent and pressing matters vis-a-vis virtual exhibitions is their reach, or lack thereof, to those on the less privileged side of the "digital divide." This writer is excited to explore solutions to this systemic problem and hopes to apply such solutions well beyond this specific effort.

Archivists must be more creative than ever, especially given recent imposed remote working operations competing with ongoing researcher expectations. Therefore, the need to connect creatively, consistently, and innovatively is as great as it has ever been. To make connections successfully, archivists must consider avenues beyond the traditional outlets and platforms and be prepared to assess their efforts routinely.

REFERENCES

- 3DCopy Systems. (2021). *Big Alice*. <https://3dcopysystems.com/big-alice/>.
- Battle, M., Mobley, T., & Gilbert, H. (2016). Digital Public History in the Library: Developing the Lowcountry Digital History Initiative at the College of Charleston. In H. Gilbert & J. White (eds.), *Laying the Foundation: Digital Humanities in Academic Libraries* (pp. 35-58). West Lafayette, Indiana: Purdue University Press. DOI:10.2307/j.ctt163t7kq.6.
- Bowden, E. A. (2013). *Archives Outreach in a Digital World: Promoting digital content through online outreach efforts*. <https://doi.org/10.17615/whcv-c902>
- Cattell, G. (05. 10. 2015). Outreach for Archives - Best Practice Tips. *Townsworld Archiving*. <https://blog.townsworldarchiving.com/2015/10/outreach-for-archives-best-practice-tips>
- Clerkin, C., & Taylor, B. (2021). Online Encounters with Museum Antiquities. *American Journal of Archaeology*, 125(1), 165-175. DOI:10.3764/aja.125.1.0165.
- Consortium of Academic and Research Libraries of Illinois (CARLI). (2020). *Guidelines for the Promotion of Digital Collections: Best Practices for Promotion and Marketing*. https://www.carli.illinois.edu/sites/files/digital_collections/documentation/guidelines_for_promotion.pdf
- Corporation for Digital Scholarship, the Roy Rosenzweig Center for History and New Media, and George Mason University. (2020). *Omeka*. <https://omeka.org/about/project/>
- Fashion Institute of Technology. (2021a). *Our Mission*. <https://www.fitnyc.edu/about/mission.php>
- Fashion Institute of Technology. (2021b). *Special Collections and College Archives*. <https://www.fitnyc.edu/academics/library/sparc/>
- Fashion Institute of Technology. (2021c). *The FITting Room*. <https://www.fitnyc.edu/library/digital/index.php>
- Fashion Institute of Technology. (2021d). *SPARC Connect*. <https://atom-sparc.fitnyc.edu/a-beller-co-sketch-collection-1914-1929>

- Fashion Institute of Technology. (2021e). *FIT DTech*.
<https://dtech.fitnyc.edu/webflow/index.html>
- Fashion Institute of Technology. (2021f). *Max Meyer and A. Beller & Co.: Interpreting a Hidden History of NYC's Garment District*.
<https://sparcdigital.fitnyc.edu/exhibits/show/meyer-beller>
- Fashion Institute of Technology. (2021g). *SPARC Digital*.
<https://sparcdigital.fitnyc.edu/>
- Forster, E. M. (1921). *Howards End*. Vintage Books.
- Merriam-Webster Dictionary. (2021a). *Augment*.
<https://www.merriam-webster.com/dictionary/augment>
- Merriam-Webster Dictionary. (2021b). *Case study*.
<https://www.merriam-webster.com/dictionary/case%20study>
- Merriam-Webster Dictionary. (2021c). *Digital divide*.
<https://www.merriam-webster.com/dictionary/digital%20divide>
- Paterson, D. (2020). Photo, evening coat, circa 1925.
- Ruecker, S. & Roberts-Smith, J. (2017). Experience Design for the Humanities: Activating Multiple Interpretations. In J. Sayers (ed.), *Making Things and Drawing Boundaries: Experiments in the Digital Humanities* (pp. 259–270). Minneapolis; London: University of Minnesota Press. DOI:10.5749/j.ctt1pwt6wq.34.
- Sabharwal, A. (2012). Digital Representation of Disability History: Developing a Virtual Exhibition. *Archival Issues*, 34(1), 7–26. Viewed: <http://www.jstor.org/stable/41756159>
- Society of American Archivists (SAA). (2020a). *Dictionary of Archival Terminology*.
<https://dictionary.archivists.org/entry/outreach.html>
- Society of American Archivists (SAA). (2020b). *Dictionary of Archival Terminology*.
<https://dictionary.archivists.org/entry/advocacy.html>
- Statista. (2021). Number of mobile augmented reality (AR) active users worldwide from 2019 to 2024. <https://www.statista.com/statistics/1098630/global-mobile-augmented-reality-ar-users/>
- Trivette, K. (2021). *The Whole of Her Sermon: Connecting People to Archives in the Age of COVID-19* [Unpublished manuscript]. Department of Archival Sciences, Alma Mater Europaea, Maribor, Slovenia. <https://docs.google.com/document/d/15U13AACx-Ybs61X-ps3SN2NlOKgpjbQ2P/edit#heading=h.gjdgxs>
- ZapWorks. (2021). *ZapWorks Studio*. Viewed: <https://zap.works/studio/>