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## **Sustainable Initiatives in Material Realms: Curating Fashion and Textile Exhibitions in Museums for Environmental Advocacy**

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### **Citation**

Duijn, I. (2024). *Sustainable Initiatives in Material Realms: Curating Fashion and Textile Exhibitions in Museums for Environmental Advocacy*.

Version: Not Applicable (or Unknown)

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Downloaded from: <https://hdl.handle.net/1887/3926659>

**Note:** To cite this publication please use the final published version (if applicable).

# CULTIVATING ENVIRONMENTAL CONSCIOUSNESS AND INSPIRING ACTIVE PARTICIPATION IN MUSEUMS

Sustainable Initiatives in Material Realms: Curating Fashion and Textile Exhibitions in  
Museums for Environmental Advocacy

Key Words: Sustainable promotion, sustainable development, textile curation, museums, exhibitions

## ABSTRACT

This paper opens a discussion into sustainable practices and their influences on museums. It specifically examines how museums have used fashion and textile exhibitions to advocate for sustainability while further presenting suggestions on how museums can proceed with sustainable goals in mind. Understanding that sustainability in museums needs collaborative and international aid to be implemented successfully, this research hopes to deepen scholarly pursuits in this subject by analysing how European museums have fostered environmental awareness and how they have used collective action to educate audiences on the interplay of materials and sustainability ethics.

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## Introduction

When diving into the current discourse on Europe's museum industry, there is a noticeable shift towards curating narratives for visitors that give insight into sustainable textiles, as seen through scholarly research, public engagement, and exhibitions. This discourse needs further recognition, not only from national institutions but also from smaller and localised establishments. Through evaluating recent collaborative efforts in the museum industry, academic research has the potential to provide valuable insights into specialised practices, policy implications, and innovative approaches for integrating sustainability into museum strategies. Research in this field can be developed to minimise negative environmental impact, promote social responsibility, and support ongoing sustainable initiatives within museums. This body of work will look at recent evaluations on sustainably oriented fashion and textile exhibitions, particularly in European museums, which can be shared with other museums to contribute to an ongoing global movement towards museal sustainability and advancing scholarship in the field of museum studies. Importantly, becoming active in this discourse can encourage museums to identify areas for improvement, evaluate the effectiveness of their current efforts, and make informed decisions about future investments; all of which are actions that should place value on the collective insight and efforts of diverse museum communities.

During the International Council of Museums (ICOM) conference in Kyoto 2019, the topic of sustainability was noticeably given a stage spotlight. In a statement issued by Suay Aksoy, President of ICOM, the importance of museums in addressing global issues, particularly sustainability, was emphasised:

“Bold action is needed to address the ecological and social crises that humanity has caused. As stewards of the planet's cultural and natural heritage, it is incumbent on museums to contribute to this task. As trusted sources of knowledge, museums are uniquely placed to engage our communities in generating positive action, promoting respect for all living beings and the earth systems on which the future of the planet depends.”<sup>1</sup>

The statement made by Aksoy not only addressed the urgent need for action towards surfacing ecological and social crises but also universally encouraged museums to use their

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<sup>1</sup> ICOM, “President's Statement on the Alignment of ICOM with the UN Agenda 2030”.

role as stewards of both cultural and natural heritage. This attention to the museum's potential for cultivating sustainability sparks a curiosity into the ongoing efforts within the museum industry to recognise environmentally conscious practices. This upcoming discourse within the museum sector was also clearly asserted by Izabela Luiza Pop et al. in a 2019 article on 'Achieving Cultural Sustainability in Museums' when it was stated that "given the mission of museums to collect, preserve, and research cultural artefacts, as well as to use the heritage for educational, study, and enjoyment purposes, they have started to be regarded as having a key role in shaping our sustainable future".<sup>2</sup> With statements such as these coming to the foreground, the research presented in this paper will examine ongoing discourse and museological practices surrounding sustainability, looking specifically into how museums are acknowledging these conversations in exhibitions related to textiles. The central aim is to understand how museums have incorporated textiles into their exhibitions to create sustainable narratives that promote environmental consciousness amongst visitors. This focuses on encouraging conversations about the curatorial capabilities of European museums and their efforts to raise environmental awareness through sustainable initiatives. In doing so, this research can hopefully educate readers on the proactive steps museums have taken in recent years by surfacing examples of curation, as well as evaluate whether further initiatives and collaborative efforts are required to meet sustainability goals in the coming years.

This thesis asks the question: What specific museological strategies and curatorial practices have museums implemented to effectively cultivate environmental awareness in their visitors to ensure long-term influence, particularly in the context of textile curation? If museums are indeed to take on the role of "stewards of the planet's cultural and natural heritage", as Suay Aksoy suggested above, sustainability should become an active and conscientious commitment to maintaining the capability and resilience of a system or concept, be it environmental, social, or cultural. To achieve this, one can search for approaches in museums that drive an acknowledgement of the imbalances between human actions and the natural world and take responsibility for the consequences of decisions and actions that are in pursuit of an obtainable, sustainable future.

ICOM's definition of a museum, which it has used and supported since 2022, includes the claim on its official website that a museum is "Open to the public, accessible and inclusive, museums foster diversity and sustainability".<sup>3</sup> This new definition has been

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<sup>2</sup> Pop et al., "Achieving Cultural Sustainability in Museums", 2.

<sup>3</sup> ICOM, "Museum Definition".

improved since the previous 2007 definition in which sustainability was not acknowledged. However, since it had taken ICOM over a decade to officially acknowledge sustainability as a priority, the museum industry has a long way to go in implementing this definition successfully. The term sustainability itself is considerably difficult to define due to its multifaceted and nuanced quality. In a 2016 article by Izabela Pop and Anca Borza, titled ‘Factors Influencing Museum Sustainability and Indicators for Museum Sustainability Measurement’, ICOM’s idea of sustainability was described as:

“The dynamic process of museums, based on the recognition and preservation of tangible and intangible heritage with the museums responding to the needs of the community. To be sustainable, museums, through their mission, must be an active and attractive part of the community by adding value to the heritage and social memory.”<sup>4</sup>

Although having used a slightly vague concept, Pop and Borza have indicated the critical need for active participation in museums when it comes to integrating sustainability into targeted communities. When looking into sustainability itself as a word, Irene M. Herremans and Robin E. Reid’s definition of sustainability from their work ‘Developing Awareness of the Sustainability Concept’ states: “The term sustainability is abstract; it means capable of being maintained over the long term. Its derivative, sustain, means ‘to keep in existence; keep going; to carry the weight or burden of; to bear up against’”.<sup>5</sup> This definition is helpful because, according to this perspective, sustainability is fundamentally about the means to persist and endure over the long term; thus, in the context of this thesis, it can be applied to museums that have means of presenting forms of maintenance, preservation, and sustainment. A museum’s level of sustainability can therefore be seen as tied to its capacity to adapt and transform itself in efforts towards continuous influence.

In 2015, the United Nations approved a series of sustainable development goals (SDGs) aimed for achievement by 2030, which ICOM included in its ‘Working Group on Sustainability Mandate’ (2020 - 2022).<sup>6</sup> The mandate’s strategic objectives specify that it wanted “To inspire ICOM, its committees and members through science based data and

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<sup>4</sup> Pop and Borza, “Factors Influencing Museum Sustainability and Indicators for Museum Sustainability Measurement”, 3.

<sup>5</sup> Herremans and Reid, “Developing Awareness of the Sustainability Concept”, 17.

<sup>6</sup> “In September 2015, at the UN summit in New York City, the Sustainable Development Goals (SDGs) have been adopted by the heads of governments of almost 200 countries. The goals identify a set of objectives designed to help the world to move towards sustainable development, by addressing its three dimensions: economic development, social inclusion, and environmental sustainability.” Campagnolo et al. “Assessing SDGs”, 2.

strategies to embrace the UN Sustainable development goals and promote good practices in becoming energy efficient, sustainable institutions”.<sup>7</sup> By adopting these objectives into the museum context, ICOM indicated that the United Nations’ SDGs can educate the public about sustainable practices and contribute to global efforts to address environmental challenges. Due to this, the SDGs will be used as a supporting theoretical framework in this paper to align the studied museums’ sustainability efforts with a globally recognised set of goals. Rather than listing out all seventeen goals, a table of the SDGs provided by the 2017 edition of the *European Journal of Sustainable Development Research* will be referred to from the figure appendix of this paper (Fig. 1.).

This thesis will present three case studies related to the field of sustainable museum strategy and practice in European museums. The first is the *Fashioned from Nature* exhibition displayed at the Victoria and Albert Museum (UK) from April 2018 to January 2019; the second will be on *Hands on Biofilm!* which commenced at the Manchester Science Festival hosted by the Science and Industry Museum in Manchester (UK) in 2022; the third case study will be the exhibition *The Common Thread*, which was displayed at the Weltekulturen Museum (Germany) from mid-November 2016 till late August 2017. The selected case studies encompass a range of exhibition formats and themes within the broader themes of sustainability and textiles. Each case study has different ways of looking at sustainability through the lens of textile curation, presenting unique interpretations of sustainable materials and providing diverse intel into different curatorial approaches across Europe.

The types of museums that engage with this subject matter tend to have consistent, thematic focuses on fashion, design, sustainability, and cultural heritage and are well-positioned to showcase and educate visitors about sustainable textiles. However, this research has not limited itself to other establishments or temporary events exhibited within museums like the Manchester Science Festival, which ran from the 21<sup>st</sup> to the 30<sup>th</sup> of October. Thus, the case studies in this paper have been selected to demonstrate a diverse range of museums, their specialised practices, policy implications, and innovative approaches towards sustainability. The exhibitions will be assessed and studied under various topics, including the attention to administering and practising sustainable plans, the uses of textile innovation, and the curatorial approaches that were taken to achieve the stated aims and missions. By doing this, specific and unique understandings can be made of how these factors contribute to the overall success and effectiveness of the organisations involved.

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<sup>7</sup> ICOM, “Working Group on Sustainability Mandate”, 2.

In her book *Museums and the Interpretation of Visual Culture*, Eilean Hooper-Greenhill stated:

“Museums are one of the West’s signifying systems that have been used to construct dominant canons. At the present time, the ostensibly timeless ideals of the Enlightenment (beauty, truth, knowledge) are being modified, and those structures created by the modernist state, such as the public museum, are being forced to re-examine their purposes.”<sup>8</sup>

Her insight into the growing development of museums in the West as leaders in revision reflected an engendered model change in how Western museums have been gunning to incorporate progressive structures, such as sustainability politics and, by extension, textile innovation, into their exhibitions. Hooper-Greenhill has also acknowledged that museums that are able to execute these types of “exhibitions can open up ideas that have long been suppressed and can make formerly invisible histories visible”.<sup>9</sup> From this, one can start to ask questions about how museums have curated and expressed interactive and innovative displays that have effectively given rise to the environmental benefits of sustainable textiles to visitors, while also addressing the non-beneficial realities of the textile and fashion industry. According to Virginija Daukantienė, a professor at Kaunas University of Technology, in her ‘Analysis of the Sustainability Aspects of Fashion’, “the fashion industry is the second-most polluting industry in the world. This is the main reason why it has to be transformed into a more sustainable one”.<sup>10</sup> This in discussion can be used to motivate a sociocultural debate around the negative qualities of the fashion industry in which museums should play a role; changing sociocultural perceptions around sustainability for a consuming and museum-going public, as well as advocating for sustainable practices to be taken up by the fashion industry itself.<sup>11</sup>

In this paper, each case study will demonstrate the multifaceted and demanding aspects of the curatorial role and the strategies used to create exhibits that engage well with audiences. The research will examine the choices, evaluations, and creative techniques used to craft displays that have pushed the sustainable narrative in museums forward. This is in line with Hooper-Greenhill’s opinion that “the idea of the museum needs to be reworked, and

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<sup>8</sup> Hooper-Greenhill, *Museums and the Interpretation of Visual Culture*, 140.

<sup>9</sup> Ibid., 19.

<sup>10</sup> Daukantienė, “Analysis of the Sustainability Aspects of Fashion”, 1.

<sup>11</sup> “In fashion, a textile refers to any material made of interlacing fibers that can be used to manufacture garments, accessories, or even functional or decorative items.” Meyer, “What is Textile in Fashion?”.



much of this will entail the development of an understanding of the relationship between museums and their audiences”.<sup>12</sup> In light of this, it can be acknowledged that the social impact of sustainable narratives in museums is paramount, including how these narratives influence visitors’ perceptions and to what extent they bring about behavioural change. It is then sensible to further deepen this research by analysing the challenges and opportunities involved in curating sustainable narratives, to provide valuable insights for museums to overcome obstacles caused by visitor engagement. Edwina Ehrman, who is a leading curator of textiles and fashion at the V&A, stated, “The textile and fashion industries have had a negative environmental and social impact for centuries”.<sup>13</sup> So, as museums continue to evolve, it is essential to emphasise the significance of sustainable narratives and position textiles as critical subject matter for conveying powerful messages to inspire collective action for a more sustainable future, both in relation to the display of fashion and textiles from the past and to textile innovations intended for future implementation.

For Vanessa Von Gliszczyński, who worked on the exhibition *The Common Thread* at the Weltkulturen Museum, “textiles and textile techniques are a fascinating and yet challenging topic for an exhibition in an ethnological museum, as they are connected to numerous social, cultural and historical questions and often have very sensitive conservation needs”.<sup>14</sup> As Von Gliszczyński’s statement makes clear, textiles are selected for their sensory appeal within the context of museum display, providing a unique way to connect with visitors on an emotional level and as well as through tactile sensations. This paper acknowledges the significance of textiles as universal, everyday materials and sees them as tools for storytelling, cultural expression, and environmental advocacy within museums. It will therefore, focus, but not exclusively, on fashion as a cultural and influential strand of textile showcasing in the museum sector.

That fashion provides an accessible topic through which visitors can connect with the (museal) object is also clear from the work of Dr Puspita Ayu Permatasari and N. Kalbaska. In their 2022 article on ‘Digital Technologies for Communicating Fashion Heritage’, Permatasari and Kalbaska provide a clear argument that “fashion is considered as culture, as it is strongly related to the aesthetic forms of how wearing objects (for example, clothing, jewellery) might demonstrate taste, and the preferences of an individual or group of people in

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<sup>12</sup> Hooper-Greenhill, *Museums and the Interpretation of Visual Culture*, 22.

<sup>13</sup> Ehrman, “Fashioned from Nature”, 11.

<sup>14</sup> Von Gliszczyński, “Behind the Cloth”, 149.

accordance with their identity, philosophy, religion, music, habits and customs”.<sup>15</sup> This quote is helpful as it emphasises the cultural significance of fashion, placing it as more than just clothing or accessories but as a form of expression that is deeply intertwined with identity, values, and social norms. The authors additionally point out that “since fashion is closely related to the history of humankind – specifically, the way of wearing and producing apparel, textiles and designs – it becomes a part of cultural heritage that is worth being taken care of and promoted by museums as cultural institutions”.<sup>16</sup> So, by understanding the cultural essentiality of fashion within the domain of textiles and examining the universal position textiles have in communicating messages of sustainability, this study places at its centre the medium’s ability to inspire all visitors to contemplate the environmental consequences of their actions with textiles. Textiles can then be utilised through fashion to construct a story for society that is more mindful of its impact on the environment.

In summary, the discussions surrounding Europe’s museum industry are currently making clear efforts towards addressing global sustainability issues and the potential of the museum as a sustainable role model. Through exemplary efforts of scholarship, public engagement and exhibitions, this paper will provide an introductory understanding of specialised practices, policy implications, and innovative approaches for integrating sustainability into museum practices. To achieve this, the paper will be using a methodological approach of case studies that exemplify museums that have effectively integrated sustainable narratives into their programmes. The hypothesis of the thesis posits that the assessment of curatorial and exhibition developments can serve as a methodological tool for addressing social, cultural, and economic considerations within the museum domain. The research will be conducted through secondary literature, including documents, scholarly writings, and exhibition catalogues that explore visitor engagement. Due to resource limitations and the busy schedules of the curators involved in the case studies, the paper has instead relied on existing interviews and critical examinations of the exhibits. The data analysis discovered in the secondary literature has been helpful in comprehending the challenges and successes of the case studies selected by this thesis. Finally, based on the conclusive findings of the thesis, innovative display strategies and recommendations will be suggested.

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<sup>15</sup> Permatasari and Kalbaska, “Digital Technologies for Communicating Fashion Heritage”, 61.

<sup>16</sup> Ibid., 60.

## Foundations of Current Research

Interest in sustainability, fashion, and textiles is noticeably gaining traction. This can be found, for example, in the public acknowledgement of environmental regulations and sustainability initiatives by governments and international organisations like ICOM.

However, there are still significant drawbacks within this subject that need attention and further exploration. While there has been an increasing recognition for the environmental and cultural impact of the fashion and textile industry, more research is needed into the specific strategies and practices that can produce attitudinal change within sustainable curation and exhibition designs.<sup>17</sup> This can be improved by investigating how curators have actively promoted sustainability through their collection processes, display methods, and storytelling choices. Notably, a limited number of initiatives, the majority of which were European, were found to be interested in displaying the relationship between sustainability and textiles in museums. This should no longer be the case as sustainably oriented curation incorporates not only environmental considerations but also social justice, ethical production, and cultural preservation which should be valued by all museums worldwide.<sup>18</sup> Understanding how these intersecting factors influence curatorial decisions and audience engagement is very relevant for creating truly rounded and impactful exhibitions. Diligent interdisciplinary research, which holds value in integrating academic theory and industry practices, is necessary. Museums can grow as sustainable role models by welcoming collaborations among scholars, curators, designers, and industry professionals; through the exchange of knowledge and practical experiences, more innovative and memorable approaches to sustainable fashion and textile curation can be achieved.

## The Museum and the Visitor

When finding material on matters of visitor engagement, curatorial approaches, and the impact of visitor perception, Eilean Hooper-Greenhill's writings in the first chapter of *Museums and the Interpretation of Visual Culture* provide an extensive read on finding and

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<sup>17</sup> Harsanto et al., "Sustainability Innovation in the Textile Industry", 1.

<sup>18</sup> Ehrman, *Fashioned from Nature*, 11.

making meaning in the museum and how to face the complexities found in that task. For her, “the biggest challenge facing museums at the present time is the reconceptualisation of the museum/audience relationship... As museums are increasingly expected to provide socially inclusive environments for life-long learning, this need for closeness to audiences is rapidly becoming more pressing”.<sup>19</sup> This statement underscores the museum’s evolving role in contemporary society, reflecting a shift towards greater emphasis on audience engagement and inclusivity. Traditionally, museums were perceived as institutions primarily focused on collections, preservation, and scholarly research, with limited interaction with their audiences. Hooper-Greenhill explains that “during the second half of the nineteenth century, museums were understood to be educational institutions with important and far-reaching social roles. However, their pedagogic approach was based both on a formal didacticism and on the conviction that placing objects on view was sufficient to ensure learning”.<sup>20</sup> This formality is changing according to Hooper-Greenhill, who previously argued that a “reconceptualisation of the museum/audience relationship” has taken place, which highlights the pressing need for the alteration of visitor and object distance within museum discourse. Instead of their traditional one-way communication model where museums transmit knowledge to passive audiences, museums are being advised towards a more interactive and participatory approach.

When developing the concept of visitor participation more fully, Hooper-Greenhill goes on to say that:

“The view of education as a process that prioritises the experience and learning needs of the learner, combined with a greater recognition of the diverse social characteristics and cultural attitudes of differentiated audiences, demands now that museums develop new forms of relationships with visitor and user communities which are based on more interpersonal methods of communication, and on much broader approaches to pedagogy.”<sup>21</sup>

Hooper-Greenhill’s statement supports the idea that museums have an essential part to play in generating and improving connections with their visitors. This can be done, for example, by encouraging feedback and the collaborative creation of a diverse range of experiences; museums can then transform into evolving centres for cultural exchange, dialogue, and community involvement. She goes on to say that “museum pedagogy is structured firstly

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<sup>19</sup> Hooper-Greenhill, *Museums and the Interpretation of Visual Culture*, 1.

<sup>20</sup> Ibid., 2.

<sup>21</sup> Ibid., 3.

through the narratives constructed by museum displays and secondly through the methods used to communicate these narratives”.<sup>22</sup> As educational institutions, they are tied to the concept of “lifelong learning,” and Hooper-Greenhill’s views highlight the importance of museums embracing a more audience-centric approach to amplify their relevance and societal significance.

Another noteworthy conversation about the evolution of the museum is presented by Peter Vergo in his book *The New Museology*, describing new museology as a “state of widespread dissatisfaction with the ‘old’ museology, both within and outside of the museum profession”.<sup>23</sup> This dissatisfaction with ‘old’ museology would start from a recognition of its limitations, which often prioritises authoritative narratives and passive visitor engagement. Vergo explains in his book that “the best museum displays are often those which are most evidently self-conscious, heightening the spectators’ awareness of the means of representation, involving the spectator in the process of display”.<sup>24</sup> For him, the new museology advocates for more inclusive, participatory, and visitor-oriented approaches to curation. In the context of sustainable narratives in museums focused on fashion and textile curation, the principles of new museology are particularly relevant. By involving communities, designers, artisans, and other stakeholders in the curation process, museums that follow new museology should be able to develop exhibitions that showcase the informative and collaborative qualities of sustainable fashion and textile practices to their visitors. Overall, this idea towards the new and active museum encourages social change which will contribute to a more inclusive and environmentally conscious society, not just within the museum.

### Sustainable Narratives in Museums

An uncommon but relevant narrative perspective within museums is that of sustainable narratives. In essence, it trials traditional museum roles by advocating for dynamic and unconventional curation that asks for a progression in environmental consciousness within the cultural sector. These narratives strategically intertwine environmental and cultural themes by displaying the interconnectedness of nature and human activities. Looking into current conversations about sustainable development, authors Michelle M. L. Lim, Peter

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<sup>22</sup> Ibid.

<sup>23</sup> Vergo, *The New Museology*, 3.

<sup>24</sup> Ibid., 20.

Søgaard Jørgensen, and Carina A. Wyborn discuss it as “development that meets the needs of the present while safeguarding Earth’s life-support system, on which the welfare of current and future generations depend”.<sup>25</sup> They further “recommend this as the end goal that the United Nations sustainable development goals (SDGs) should strive to achieve”.<sup>26</sup>

Sustainable development in the context of museums asks for a broader consideration of long-term consequences in the narratives of the museum. For example, while sustainable practices may focus on conserving resources, sustainable development wishes to extend beyond this by explicitly addressing problematic societal needs and challenges, such as poverty, inequality, and environmental justice.

Sustainable narratives in Western museums can prompt us to rethink these cultural spaces as catalysts for environmental stewardship and cross-generational dialogue. According to Izabela Pop et al, “in order to reach environmental responsibility, social justice, and economic development, a certain set of values and behaviours should be developed among individuals”.<sup>27</sup> Environmental responsibility entails supervising natural resources and minimising ecological impact, while social justice involves advocating for equitable distribution of resources and opportunities. For Pop et al., it is essential to achieve economic development that prioritises growth alongside social and environmental responsibilities because in doing so, the task of instilling values such as sustainability, equity, and ethical decision-making among those who interact with the museum becomes attainable (SDG 4). This concept of responsibility is continued by Pop et al., who stress that:

“As a sustainable society depends on a sustainable culture, any action to achieve sustainable development goals must take into account not only the natural, social, and economic environment but also the cultural environment. If the culture of a society disintegrates, so will all its other components.”<sup>28</sup>

So, by recognising the cultural aspect of sustainable development, museums can foster a sustainable culture that supports sustainable development objectives.

The sustainability of a society depends greatly on the robustness of its culture, as it shapes every aspect of its existence. The way in which museums can contribute to the sustainability of specific communities is pointed out in the writings of Pop et al., who edify that “given the mission of museums to collect, preserve, and research cultural artefacts, as

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<sup>25</sup> Lim, Jorgensen and Wyborn, “Reframing the Sustainable Development Goals to Achieve Sustainable Development in the Anthropocene”, 1.

<sup>26</sup> Ibid.

<sup>27</sup> Pop et al. “Achieving Cultural Sustainability in Museums”, 1.

<sup>28</sup> Ibid.

well as to use the heritage for educational, study, and enjoyment purposes, they have started to be regarded as having a key role in shaping our sustainable future”.<sup>29</sup> For Pop et al., museums contribute to a sustainable future by preserving and showcasing cultural heritage, educating communities and making narratives within the museum both impactful and enjoyable. With this attention to museums undertaking steps to bring about a sustainable future, the concept of the new and evolving museum has also been regarded by Wang, Yun-Ciao, and Shang-Chia Chiou in their work on ‘An Analysis of the Sustainable Development of Environmental Education Provided by Museums’ who describe it as “oriented toward diversified management and ... an important cultural carrier”.<sup>30</sup> Therefore, in order for a museum to succeed with sustainable narratives holistically, it needs to focus on inclusivity and innovation as well as integrate sustainable development into its ethos. The exemplified sustainable approach to museum management in the field of cross-cultural learning correlates with the UN’s SDG 9 (Fig. 1.). As ‘cultural carriers’ new museums are dedicated to engaging diverse audiences, nurturing creativity, and enhancing collective understanding of cultural heritage. Looking into the capabilities of museums as cultural carriers, Pop et al. express that “one of the fundamental tasks of museums is to collect and preserve tangible and intangible cultural heritage so that cultural knowledge and skills, as well as memory and identity issues, can be passed on”.<sup>31</sup> What can be understood by these insights is that when looking at what sustainably oriented museums mean to their societies, curators can support sustainable narratives by creatively incorporating themes of environmental consciousness into their exhibits that prioritise cultural heritage. Museums will then actively contribute to instilling cultural values within their societies that align with sustainable development goals and become instrumental in upholding a healthy societal foundation, promoting environmental awareness, and generating a culture that prioritises it.

### Fashion and Textile Curation in the Museum

The field of museums involved with textile and fashion curation interested in sustainability is a very young and upcoming area of interest. Looking at the basis of this type of curation, in the work of Rech, Permatasari and Kalbaska, the sector of “fashion curation refers to an

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<sup>29</sup> Ibid., 2.

<sup>30</sup> Wang and Chiou. “An Analysis of the Sustainable Development of Environmental Education Provided by Museums”, 2.

<sup>31</sup> Pop et al., “Achieving Cultural Sustainability in Museums”, 2.

activity of translating historical clothes into the context of contemporary times, by selecting, staging and designing thematic exhibitions in such a way that they are beautiful, insightful and able to engage people and immerse them in artistic values and historical significance”.<sup>32</sup> With this in mind, museums can display a historical progression of sustainable textile production and fashion design practices by curating aesthetic and informative collections. When it comes to advocating for sustainability in museums, fashion and textile curation can play a significant role by exemplifying awareness about environmental responsibility and illuminating mindful consumption practices. They can bring light to innovative techniques that prioritise ethical sourcing, production methods, and material selection. Textile invention and innovation provide museums with opportunities to investigate and showcase sustainable substitutes to traditional textiles and advanced solutions for reducing waste and minimising environmental impact.

When asked to pinpoint the precise relevance of fashion curation within museums, Dr Puspita Ayu Permatasari and N. Kalbaska have explained how “since fashion is closely related to the history of humankind – specifically, the way of wearing and producing apparel, textiles and designs – it becomes a part of cultural heritage that is worth being taken care of and promoted by museums as cultural institutions”.<sup>33</sup> Due to its reflection of societal standards and identities, fashion in museums is felt to hold substantial historical and cultural significance, deserving preservation and promotion by museums. This is contextualised by Permatasari and Kalbaska, who discuss how:

“The first major fashion exhibition, ‘Fashion: An Anthology by Cecil Beaton’, held in 1971, exhibited dress collections of contemporary celebrities in Britain and abroad and attracted 90,000 visitors. Hence, due to this successful event, the method of fashion curation that merges fashion staging with art, culture, commerce, entertainment and tourism was then adopted by several other museums globally.”<sup>34</sup>

The 1970s are further acknowledged by the teacher’s resource for *Fashioned from Nature* as an era of growing environmental awareness in which “the first government departments for the environment were established, the United Nations held the first major conference on international environmental issues, and the first Earth Day took place in the USA”.<sup>35</sup> Fashion

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<sup>32</sup> “The word ‘curation’ derives from the medieval Latin *curatus*, meaning ‘looked after’”. Permatasari and Kalbaska, “Digital Technologies for Communicating Fashion Heritage”, 63.

<sup>33</sup> Permatasari and Kalbaska, “Digital Technologies for Communicating Fashion Heritage”, 60.

<sup>34</sup> *Ibid.*, 64.

<sup>35</sup> V&A, “Teachers’ Resource: Fashioned from Nature”, 10.



curation has since grown and undergone rapid transformations driven by technological advancements, globalisation, and shifting consumer expectations. The role of museums in reflecting and interpreting these trends thus became increasingly relevant. Permatasari and Kalbaska go on to state:

“Displaying fashion in museums becomes an effective strategy with the aim of better showcasing to the public the tangible and intangible characteristics of fashion such as design, craftsmanship, art and the history of its production. The integration of fashion items and events within a museum could attract more visitors from diverse cultural backgrounds to visit the museum and stimulate the growth of the creative industry in the territory.”<sup>36</sup>

Fashion exhibitions provide a valuable opportunity for cross-cultural exchange and dialogue. They invite visitors of all cultural backgrounds to explore and celebrate diverse aesthetic traditions and clothing practices. This element of inclusivity is crucial in improving active participation in museums that educate material sustainability. The integration of fashion within museums will enhance the visitor experience by providing reflective and detailed insights into fashion’s multicultural artistry and history. What can be understood here is that the European fashion industry is conversing with museums due to a need for heightened environmental consciousness. This has been explicitly done through exhibitions showcasing sustainable practices, educational programs engaging diverse audiences, collaborations within sustainable collection management, and public advocacy efforts promoting responsible consumption. Authors Yun-Ciao Wang and Shang-Chia Chiou point out how “museums use displays, collections, and environmental and other factors to achieve a professional level, and then convey knowledge to audiences, hoping to achieve the benefits of education. Recently, educational institutions have realised that museums are ideal educational settings that can support active learning”.<sup>37</sup> Museums that balance their aims practically with educational efforts contribute to initiating discussions and informing visitors successfully about the ecological impact of textiles and the potential for sustainable practices.

However, as discussed by Virginija Daukantiene, “covering all aspects to ensure knowledge of fashion sustainability, law and regulation, inter-functional collaboration, research and development investments, and innovation-oriented learning have also to be

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<sup>36</sup> Permatasari and Kalbaska, “Digital Technologies for Communicating Fashion Heritage”, 60.

<sup>37</sup> Wang and Chiou, “An Analysis of the Sustainable Development of Environmental Education Provided by Museums”, 3.

involved”.<sup>38</sup> This indicates that overall, while the scholarly examination of textile invention and innovation within fashion museums offers a great insight into the elaborate mechanics of human ingenuity and the evolving dynamics of the fashion industry, many other educational elements are needed to construct knowledge on this topic. Within this context, curatorial decisions and academic actions are brought together to steer a narrative in museums that educates and motivates thought on the multifaceted qualities of sustainable craftsmanship and its enduring influence on social discourse.

### Innovative Curatorial Approaches in Textile-Oriented Exhibitions

Museums are becoming more attuned to the influential benefits of exhibitions dedicated to fashion and textiles. As noted by Permatasari and Kalbaska, “fashion helps museums which were not exhibiting fashion collections before, to appear relevant and appealing to the public, as they are capable of generating greater visitor numbers and wider demographics, including foreign tourists being attracted by those particular exhibitions”.<sup>39</sup> This suggests that fashion exhibitions can be interpreted universally and can therefore be welcoming for individuals who may not typically visit museums, providing them with an accessible entry point to explore cultural institutions. Museums can therefore, make their sustainable goals more appealing to a broader audience by showcasing textiles and designs that further tap into popular culture and contemporary trends. By contextualising fashion within the broader framework of sustainability, curators can help visitors better understand the fashion industry’s impact on the environment. Exhibitions can use sustainable practices with ethical sourcing, eco-friendly materials, and circular fashion initiatives. These exhibitions often include educational programming such as workshops, lectures, and guided tours, where visitors can learn more about sustainability and engage in dialogue with experts and peers.<sup>40</sup> Sharon Macdonald’s interpretation of education programming claimed, “Education, it was believed, not only helped one to ‘make something of oneself,’ but taught flexibility, adaptability, and how to survive and even prosper in a chancy world”.<sup>41</sup> This outlook can foster a sense of environmental responsibility and collective agency, helping to build a more conscientious society.

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<sup>38</sup> Daukantienė, “Analysis of the Sustainability Aspects of Fashion”, 1.

<sup>39</sup> Permatasari and Kalbaska, “Digital Technologies for Communicating Fashion Heritage”, 63.

<sup>40</sup> Ehrman, “Fashioned from Nature”, 8.

<sup>41</sup> Macdonald, *A Companion to Museum Studies*, 323.

As previously mentioned, the growing interest for sustainability in museums has highlighted some significant gaps in current research that require careful consideration. These limitations are concerned with the lack of standardised methodologies and evaluation frameworks for assessing the effectiveness of sustainable fashion exhibitions. While there are numerous case studies and anecdotal evidence of successful initiatives, empirical research is still needed to analyse the impact of fashion curation on promoting sustainability awareness and behaviour change among museum visitors. There is a need for research examining the long-term effects of sustainable fashion exhibitions, such as their influence on attitudes, perceptions, and consumption patterns over time. Budi Harsanto et al.'s idea of internal barriers in their research on 'Sustainable Innovation in the Textile Industry' shows that when practising sustainability innovation in the textile industry, there is "a lack of awareness of the need to innovate sustainably, which can be due to a lack of knowledge regarding recent innovation impact toward environmental and social aspects".<sup>42</sup> Addressing these gaps will be crucial for advancing our understanding of the challenges inherent in fashion and textile curation and developing evidence-based strategies for fostering environmental consciousness and action within museum contexts.

Museum curators can demonstrate their own active participation in resolving challenges found in fashion and textile curation by carefully selecting and showcasing fashion pieces that spotlight beauty and creativity while raising awareness about their environmental impact. By working with strategic objectives that prioritise sustainability, museums can strengthen their aims towards environmental consciousness. An effective strategy for promoting sustainable material in the museum might include interactive exhibits with hands-on or sensory activities that involve visitors in exploring sustainability concepts dynamically. These activities could include offering visitors DIY workshops or demonstrations of upcycling that illustrate the lifecycle of garments and the effects of consumer choices.

With research into 'Digital Technologies for Communicating Fashion Heritage' and its consequence on visitation, Permatasari and Kalbaska notice how "during recent decades, the integration of digital media in fashion exhibitions has had a significant impact on the development of fashion communication. Digital media allows visitors to enjoy better experiences in valorising the fashion heritage in terms of its tangible and intangible

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<sup>42</sup> Harsanto et al., "Sustainability Innovation in the Textile Industry", 16.

elements”.<sup>43</sup> By incorporating digital media, such as photographs and film, into exhibition design, museums can offer visitors dynamic and multisensory experiences that bring sustainability concepts to life. Lastly, collaborative curatorial practices involving partnerships with designers, artists, and environmental experts will enable museums to present diverse perspectives and foster interdisciplinary dialogue on sustainability issues.

Textile innovation has the potential to address societal and environmental problems and create new materials. According to Harsanto, Budi, Ina Primiana, Vita Sarasi, and Yayan Satyakti, “sustainability is viewed as the primary driver of current and future innovation”.<sup>44</sup> Textile innovation includes technological advancements and creative endeavours that revolutionise traditional textile production processes and materials. It involves the development of sustainable fibres and the integration of transformative technologies like 3D printing and nanotechnology. These advancements offer enhanced performance characteristics, aesthetic possibilities, and environmentally friendly practices. However, for Harsanto et al., “while the textile sector is well-known for its many positive contributions to the economy, it is also well-known for its considerable environmental and social issues regarding long-term sustainability”.<sup>45</sup> Harsanto et al.’s observation brings up the complicated dynamic forces surrounding sustainability within textile curation spheres. While textiles remain fundamental components of culture and history, the industry must deal with environmental and societal obstacles. To do this, curators can account for the artistic and historical worth of textiles while also assessing the industry’s impact on the environment and society. Consequently, textile curation demands attention to both the industry’s favourable and unfavourable aspects.

The motivation behind achieving sustainability within textile innovation is driven by the need to reduce the environmental impact of traditional textile manufacturing processes. Harsanto et al. highlight these issues, explaining that “there are a number of environmental concerns, including the fact that this industry consumes a great deal of energy and emits a great deal of pollutants. Water, fuel, and chemicals are all commonly used as essential resources in the textile business, and they are utilised in large quantities”.<sup>46</sup> Conventional textile production seems heavily reliant on finite resources, water usage, and chemical-intensive treatments, which contribute to pollution and climate change. Therefore, textile

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<sup>43</sup> Permatasari and Kalbaska, “Digital Technologies for Communicating Fashion Heritage”, 60.

<sup>44</sup> Harsanto et al., “Sustainability Innovation in the Textile Industry”, 2.

<sup>45</sup> Ibid., 1.

<sup>46</sup> Ibid.

innovators and artists who work with textiles need to seek and work hard for alternative approaches that prioritise environmental sustainability throughout the entire lifecycle of textile products and move away from the problematic limitations of conventional productive methods. However, according to Harsanto et al. “innovation has been occurring in the textile industry for a long period of time and is critical not only to the textile business but to other industries as well”.<sup>47</sup> Embracing innovative technologies and sustainable practices, textile manufacturers can collaborate with museums to find ways of reducing production costs and expanding distributive opportunities while minimising the negative environmental impact they have. This can inspire the textile industry to continue contributing to economies and livelihoods, particularly local ones, without affecting the ability of future generations to fulfil their own needs.

The sustainable capabilities of technological advancements in textiles go beyond just textile and museum-related benefits. They can also bring cultural and artistic expression to an unprecedented level. By combining traditional techniques with modern tools, artists and designers can learn to create pieces that resonate with diverse, global audiences. The combination of retrospective themes with modern advances in textiles could be highly affective in creating art and designs that have global appeal. In recognising the importance of both, artists and designers can create and share pieces that are not only relevant to contemporary times but also reflect cultural heritage. With design resources and production methods becoming more accessible and public, creativity has consequentially, become more self-governing. Overall, educating people on sustainable practices and providing opportunities for skill development can empower artists and workers to adapt to changing industry and social trends.

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<sup>47</sup> Ibid., 2.

## Case study one: *Fashioned from Nature*

“Buy less, Choose well, Make it last” – Vivienne Westwood<sup>48</sup>

Westwood’s clear words of instruction, selected by Jenny Rygalska, the director of ‘Our Collective Impact’, “a sustainability focused online platform which shares thought provoking climate conscious stories” are a good way to introduce the message of the first case study.<sup>49</sup> Displayed at the Victoria and Albert Museum (UK) from the 21st of April 2018 to the 27th of January 2019, *Fashioned from Nature* was showcased in the museum’s fashion gallery. According to the University of the Arts London, it was “visited by more than 175,000 people, before going on an international tour, including Denmark in 2019/20 and China in 2020/21”.<sup>50</sup> The exhibition presented both historic and contemporary objects from the V&A’s permanent collection worldwide and demonstrated the intersection between fashion and environmentally responsible exhibition practices. Edwina Ehrman, Curator of Textiles and Fashion at the V&A and curator of the exhibition, opened her introduction to the exhibition’s catalogue with a statement of support that stated, “At a time of rapidly increasing awareness of the devastating effects that human activity has had on our planet, an exhibition focussing on the environmental damage caused by the fashion industry’s practices is opportune”.<sup>51</sup> According to Ehrman, the Victoria and Albert Museum (V&A) had achieved an exhibition that “champion[ed] creativity, innovation and the benefits of collaboration and interdisciplinary research, while highlighting the critical role of the textile and fashion designers who are pioneering desirable, exciting, sustainable fashion”.<sup>52</sup> Ehrman felt that the exhibition’s title, narrative, and content prompted reflection on human behaviour and on today’s interaction with the natural world, further building on a platform to address fashion’s dependence on nature.

In an elaborate review of the exhibition, PhD candidate Jaiya A. Gray explained that the exhibition wished to “explore the intricate relationships between fashion, people, and nature from 1600 to the present day”.<sup>53</sup> Edwina Ehrman’s goals of championing creativity, innovation, and collaboration have come across in Gray’s review, putting emphasis on the exhibition’s multifaceted approach, which not only critiqued a state of unsustainable fashion

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<sup>48</sup> Westwood, “Sustainability | Vivienne Westwood”.

<sup>49</sup> Rygalska, “How the Fashion Industry Is Destroying the Planet”, 0:40.

<sup>50</sup> UAL, “Fashioned from Nature”.

<sup>51</sup> Ehrman, “Fashioned from Nature”, 8.

<sup>52</sup> Ibid., 7.

<sup>53</sup> Gray, “Fashioned from Nature”, 1.

at the time but also celebrated efforts towards sustainable alternatives. Creativity was celebrated as a driving force behind sustainable fashion, showcasing designers experimenting with eco-friendly materials, innovative production techniques, and alternative design processes. Ehrman continued by stating that the exhibition aimed “to raise awareness and to provide an open forum for discussion. Its engagement with contemporary issues, support for the design community and creative industries, and ambition to reach out to the widest possible audience accord with the V&A’s strategic plan and its founding ideals”.<sup>54</sup> For Ehrman, the exhibitions’ practical and open collaboration stood as a critical aspect of promoting sustainability in fashion exhibitions, aligning it with the V&A’s ethos and hopes of sustainably oriented progress. These creative actions demonstrated that sustainability does not equate to sacrificing style or artistic expression but encourages inventive solutions that align with environmental principles.

A description of the content and interpretation of the exhibition by Ehrman explained that the visitor’s experience began with a case that presented “the material origins of an ermine-trimmed court mantua made from Lyon silk in Britain in the 1760s. Nearby, a display of male and female fashion accessories described the importation of prestigious and expensive materials such as ivory, turtle shell and ebony to make walking sticks, parasols and fans”.<sup>55</sup> This initial presentation of luxury could have been aimed to evoke feelings of admiration and respect for the historical and cultural significance of the items on display. Although holistically aimed, this experience for the visitor may have been a distracting element from understanding the claimed goals of the exhibition that advocated for dealing with contemporary issues. In her review, Gray perceived the layout of the exhibition as “indeterminant” and went on to say, “From the entry point of the exhibition, it is uncertain as to which direction the visitor is meant to proceed—the route is circular, and one may turn to their left or right”.<sup>56</sup> This type of layout suggests that a “circular relationship” may have been intentional in its design as a metaphor for the cyclical pattern of human and natural interaction. In Ehrman’s written account of the layout, she says:

“The design brief asked in-house designers Juri Nishi and Judith Brugger to devise a scheme which metaphorically and visually linked the two floors of the exhibition gallery. It emphasised the desirability of using sustainable materials with life beyond

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<sup>54</sup> Ehrman, “Fashioned from Nature”, 7.

<sup>55</sup> Ibid., 13.

<sup>56</sup> Gray, “Fashioned from Nature”, 108.

the exhibition and specified that the design should be inspired by and evoke nature in its concept and materials.”<sup>57</sup>

In line with SDG 4 (Fig. 1.), this collaborative design brief gives the impression that a harmonious direction was desired for the exhibition both in terms of spatial planning and thematic design. With chronological guidance, starting from the entry point of the space, the ground floor of the exhibition introduced the visitor to Britain’s material production methods from the 17<sup>th</sup> century up until the 19<sup>th</sup> century, emphasising the intrinsic qualities of materials, such as wool, cotton, and silk. Ehrman further explained that on the mezzanine level of the gallery:

“The twentieth-century narrative moved from the success of ready-to-wear and the dominance of the British high street by chain stores to the globalisation of the fashion industry and the impact of fast fashion. The display addresses the development and impact of man-made and synthetic fibres and the opportunities they offer designers, as well as the continuing use of fibres familiar from previous centuries.”<sup>58</sup>

A chronologically planned route is a familiar and straightforward journey for the visitor, which was perhaps needed to compensate for any feelings of perplexity or disorientation that could arise from such an educatively charged exhibition. Although the exhibition’s broad scope seemed rather ambitious, it demonstrated a commitment to providing visitors with a comprehensive understanding of the industry’s evolutionary process. By addressing topics such as the globalisation of fashion and the impact of fast fashion, the exhibition could engage with contemporary issues and trends that were relevant to a diverse audience.<sup>59</sup>

The narrative unfolded through various thematic sections, each offering insight into different aspects of the fashion industry’s environmental footprint. Ehrman said they used maps to “show the global networks of trade which underpinned the fashion industry from an early period and infographics explain the life cycle and process, for instance in the production of silk”.<sup>60</sup> By visually representing these processes, visitors could learn about the labour, resources, and technologies involved in bringing fashion products to market. Important for

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<sup>57</sup> Ehrman, “Fashioned from Nature”, 16-17.

<sup>58</sup> Ibid., 14.

<sup>59</sup> “Fast Fashion is a business model that focuses on the production of garments in bulk, and as quickly as possible, in response to current trends”. McDonald and Nicioli, “What is Fast Fashion, and Why is it So Controversial?”.

<sup>60</sup> Ehrman, “Fashioned from Nature”, 13.



Ehrman, the direction of the exhibition had “the garments and accessories support a narrative which describes the origins of the materials from which they were made, how the materials were processed and the environmental impact of their production”.<sup>61</sup> By contextualising each garment within its environmental lifecycle, the exhibition itself could cause visitors to reflect on the interconnectedness of fashion with broader environmental concerns, understand the sourcing of materials, the manufacturing process, the use of the garment, and, if possible, its disposal or recycling capabilities.

The exhibition’s narrative adeptly interpreted a way to pilot the complexities of the universal bond with nature and the simultaneous inclination to manipulate it to satisfy human desires. Ehrman explains how “the narrative never loses sight of our delight and fascination with the natural world, and our analogous but contradictory urge to control and manipulate nature through intervention and artifice, to suit our needs and our tastes”.<sup>62</sup> A statement like this makes clear that the exhibition served as an exploration of the ethical and environmental impact of human interaction with nature in the fashion industry. It brings forth a narrative that skillfully combines joy with contradiction. In an interview with British Vogue magazine, Ehrman further elucidated to the public how “one very human way in which we’ve expressed our delight in nature, our pleasure in it, our curiosity to learn more about nature is through textiles and fashion”.<sup>63</sup> Her interview on *Fashioned from Nature* with a renowned magazine like British Vogue may have invited a wider variety of visitors to reflect on the inescapable impact of human intervention on the natural world and to respect and acknowledge ethical practices being pursued in fashion design and curation.

Ehrman wrote the first chapter in the exhibition’s official book. In it, she contextualised a British wool coat and waistcoat dated from around 1795-1805, which was featured in the exhibition (Fig. 2.). She explained that “Britain’s woollen weavers drew almost entirely on home-grown wool. It had been a mainstay of the country’s economy for centuries, and some local sheep breeds were famous”.<sup>64</sup> This information could have helped onlookers to better understand the historical and cultural significance of wool-related artefacts and materials on display in the exhibit. In terms of the material’s use, Ehrman pointed out how “wool’s elasticity makes it particularly suitable for tailoring and it was an important staple of the male wardrobe”.<sup>65</sup> Such insightful and specialised information may

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<sup>61</sup> Ibid.

<sup>62</sup> Ibid., 7.

<sup>63</sup> Casely-Hayford, “Inside the V&A’s Fashioned from Nature Exhibition”.

<sup>64</sup> Ehrman, *Fashioned from Nature*, 30.

<sup>65</sup> Ibid.

have been beneficial in helping visitors understand the evolution of fashion trends and the role that wool has played in shaping fashion over time. By understanding the role of wool in the economy and fashion trends, visitors could learn to appreciate the value of sustainable sourcing and production of materials.

The environmental concerns in the exhibition's narrative include resource depletion, pollution, greenhouse gas emissions, and waste generation. The fashion industry's production processes often involve significant use of natural resources, chemical treatments, and high energy consumption. These practices give rise to various environmental concerns, such as deforestation, water pollution caused by textile dyeing, and the carbon footprint associated with transportation and manufacturing.<sup>66</sup> Ehrman discusses in her work that the objective of the exhibition was to address these issues and raise awareness of their impact on the environment in a constructive and informative manner. The several approaches to the exhibition that she wanted to include before the garments were chosen, involved "up-cycling, using pre-and post-consumer waste and dead stock; the utilisation of food waste to create textiles; recycled fibres, and fibres made from plastic waste; sustainable alternatives to animal leather, fur and feathers; fashions made with organically grown or ethically farmed fibres and textile materials".<sup>67</sup> Upcycling is a positive and sustainable approach that encourages the repurposing of waste, both pre-consumer and post-consumer. This is supported by PhD candidate Meeta Sundarlal Kharadi who wrote an article in 2023 about 'Upcycling in Fashion and Textile', referred to upcycling as the "process of repurposing leftovers, waste products, unnecessary items, or unwanted items to make new materials or items that are thought to be of higher quality, such as items with artistic and environmental value".<sup>68</sup> Khardi's insight supports Ehrman's past curatorial values, recognising ways of extending the lifespan of artistic products; promoting practices like upcycling would have most likely succeeded in sponsoring sustainable fashion.

In the foreword of the exhibition's book, activist and actress Emma Watson concluded that "clothes are something that touch our lives every day, and I admire the Victoria and Albert Museum for creating [*Fashioned from Nature*] to highlight the importance of questioning where, how and by whom our clothes are made".<sup>69</sup> Watson considered the educative elements of the exhibition, which entailed displays of recycled fibres, plastics, and

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<sup>66</sup> Ehrman, "Fashioned from Nature", 8.

<sup>67</sup> Ibid., 15.

<sup>68</sup> Kharadi, "Upcycling in Fashion and Textile", 9.

<sup>69</sup> Watson, *Fashioned from Nature*, 6.

eco-friendly alternatives to animal-based materials, commendable steps in progressing towards an ethical and sustainable future. The V&A museum was considered commendable by Watson in its efforts to engage a diverse audience, including fashion students, tourists, industry professionals, and individuals interested in sustainability and environmental conservation. The exhibition sought to feature partnerships between designers, scientists, activists, and industry stakeholders; these outlooks illustrate the potential of collective action in tackling complex environmental challenges. Through collaborative action, Ehrman was able to open the floor to diverse perspectives that were brought together to address sustainability issues as holistically as possible, nurturing a sense of shared responsibility and collective impact.

Ehrman's reference to clothing in relation to social action initiatives emphasises the interdependence of fashion with broader social and environmental concerns. She continues, revealing:

“Garments related through their materials or manufacture to social action projects; companies and designers who share information about their supply chains with their customers; companies committed to using low impact dyes, reducing their water consumption and converting to low carbon power; and more forward-facing technologies such as bio-design.”<sup>70</sup>

The integration of front-line technologies such as bio-design demonstrates a progressive strategy towards sustainability, embracing innovation and technological advancements in the fashion industry. Overall, the curatorial strategies adopted by Ehrman and her team wished to provide visitors with an in-depth and whole-hearted understanding of the complex dynamics impacting fashion development in response to ecological, societal, and cultural influences. By featuring partnerships between designers, scientists, and high-status activists like Emma Watson, the exhibition's approach aligned with some of the United Nations' Sustainable Development Goals (SDGs), particularly SDG 8 (Fig. 1.), which is aimed at promoting full and productive employment. Furthermore, the exhibition encouraged visitors to reflect on the ethical and environmental implications of their interactions with nature within the fashion industry. This reflection aligned with SDG 12, which seeks to promote responsible consumption and production patterns. The exhibition exemplified sustainable fashion solutions that aligned with environmental principles by showcasing designers experimenting

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<sup>70</sup> Ehrman, “Fashioned from Nature”, 15.

with eco-friendly materials, innovative production techniques, and alternative design processes.

Museums that incorporate informative displays to, for instance, illustrate the lifecycle of fabrics, embrace their educational roles by considering the implementation of museological strategies and curatorial practices aimed at cultivating environmental awareness among their visitors. Hooper-Greenhill informs readers that “although the idea of the museum as an educational institution had emerged some time before, the Victoria and Albert Museum was the first national collection in England to be explicitly founded as an agent of instruction”.<sup>71</sup> This advocacy for instruction from the V&A indicates the museum’s strategic aim to educate long-term. When conducting a comprehensive analysis of an institution such as the Victoria and Albert Museum, it is recommended not to glide over its instructive strategic objectives and overall mission. Understanding this will provide the necessary context to evaluate the museum’s activities within its mission and goals. This assessment helps guide decision-making and resource allocation, promote accountability, inform stakeholders, and ensure that initiatives are purposeful and contribute to the institution's core objectives. In the V&A’s financial report from 2018-2019, they state that their mission is to: “To be recognised as the world’s leading museum of art, design and performance, and to enrich people’s lives by promoting research, knowledge and enjoyment of the designed world to the widest possible audience”.<sup>72</sup> The strategic objectives are further laid out thus:

- “1. Create a world-class learning and visitor experience across all V&A sites and collections
2. Focus and deepen the relevance of our collections to the UK creative and knowledge economy
3. Expand the V&A’s international reach, reputation, and impact
4. Showcase the best of digital design and deliver an outstanding digital experience
5. Diversify and increase private and commercial funding sources”<sup>73</sup>

The absence of the concept of sustainability in both the mission statement and strategic objectives of the V&A outlined in their 2018-2019 financial report is a notable observation. Considering the increasing global emphasis on sustainable practices, the absence of explicit reference to sustainability appears to be a significant oversight. Given the institution’s commitment to enriching people’s lives and promoting knowledge to a wide

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<sup>71</sup> Hooper-Greenhill, *Museums and the Interpretation of Visual Culture*, 126.

<sup>72</sup> V&A, “Financial Report 2018-2019”.

<sup>73</sup> Ibid.

audience, integrating sustainability into its mission and strategic objectives would enhance its sustainability while also continuing to champion design and creativity for current and future generations. However, evidence of the museum's sustainable objectives can be found in the museum's more recently established three-year 'Sustainability Plan' (2021-24) that centrally covers three steps of action for Place, People, and Programme:

“We will reduce the negative environmental impact of how we deliver our activities and operate our buildings, targeting net zero emissions by 2035 - We will support our people, partners and sector to embed sustainable decision-making and practices, and to share knowledge and skills - We will take a bold approach to engaging our audiences in issues of planetary limits and climate justice, focusing on people's agency to take positive action.”<sup>74</sup>

These ambitious statements were further developed with sub-themes and the acknowledgement of international, national, and local policy, which the museum aimed to contribute to. This organisational progress of V&A Museum shows its intention to prioritise sustainability, inclusivity, and financial stability as a consequence of exhibitions like *Fashioned from Nature*.

On its website, the museum exemplifies initiatives already in play, for example, “We follow a waste hierarchy of reduce, reuse, recycle, dispose, and over the last four years we have increased our recycling from 40% to 60% of the organisation's total tonnage with none of our operational waste going to landfill, and closed loop recycling where possible.”<sup>75</sup> Such claims and statistics are reassuring to read, but the museum still has many goals to achieve, as the majority of sustainable ambitions on the site are mainly theoretical. In Sharon Macdonald's *A Companion to Museum Studies*, she notes: “The best route to new information, more refined knowledge, and the need for relevant experience is learning”.<sup>76</sup> The experience learned from *Fashioned from Nature* was undoubtedly a success as a catalyst for further advancing the museum's strategic objectives and sustainable plans, sparking dialogue and engagement with contemporary issues. The exhibition still serves as a powerful vehicle for cultivating environmental consciousness and inspiring visitor participation in sustainable fashion and textile-oriented exhibitions.

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<sup>74</sup> V&A, “Sustainability Plan 2021”.

<sup>75</sup> V&A, “Sustainability”.

<sup>76</sup> Macdonald, *A Companion to Museum Studies*, 324.

In exhibitions dedicated to collaboration and interdisciplinary research, challenges arise that require careful consideration, particularly in highlighting the position of textile and fashion designers in pioneering sustainable fashion. These challenges can encompass a number of logistical, conceptual, and practical aspects, ranging from achieving diverse collaborations to effectively communicating the targeted messages of sustainability to visitors. It is highly beneficial for curators to assess the challenges associated with showcasing sustainable fashion as part of the curatorial process. By identifying and finding solutions to these challenges, curators can begin to ensure that the exhibitions they pursue effectively communicate their intended message.

For Edwina Ehrman, in her preparation for the *Fashioned from Nature* exhibition, “balancing the representation of fashion and nature in the exhibition was one of the most demanding challenges for the exhibition team”.<sup>77</sup> As an expression of human creativity and culture, fashion often draws inspiration from nature, yet, it can also profoundly impact the environment through resource extraction, production processes, and waste generation. Therefore, the exhibition needed to balance celebrating fashion’s beauty and creativity while acknowledging and addressing its environmental consequences. In the exhibition catalogue, Ehrman exemplified a modern Japanese dress and coat made from raw silk (Fig. 3.) and admitted that “wherever possible we included unprocessed plant and animal fibres, such as silk worm cocoons and a sheep’s fleece, and natural history specimens to remind visitors of the origins of the materials utilised to create the fashions in the exhibition”.<sup>78</sup> In the exhibition, this would emphasise fashion’s dependence on natural resources and the need for sustainable practices within the trade.

Another observed challenging aspect of the exhibition was how the “gallery’s layout and footprint limited the number of materials” the team could address, so “their selection depended on the importance of the material to fashion at the time”.<sup>79</sup> Thus, the curatorial team had the task of selecting materials that would fit within the available exhibition space and be presented to engage visitors effectively, resulting in the team prioritising materials with historical and cultural significance in the fashion context while also considering their sustainability features. This meant that certain materials may have been excluded despite their relevance to sustainable fashion or environmental impact to ensure a coherent and impactful experience for visitors. For example, in the section of the exhibition dedicated to the

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<sup>77</sup> Ehrman, “Fashioned from Nature”, 12.

<sup>78</sup> Ibid., 13.

<sup>79</sup> Ehrman, “Fashioned from Nature,” 12.

nineteenth century, a display about cotton and its manufacturing process was mentioned, including an image of cotton pickers in Savannah, Georgia, USA, ca.1890 (Fig. 4.). Ehrman commented on this display in the catalogue and how its purpose was to “describe the effects of industrialisation, urbanisation and the consequent rise in pollution setting the scene for the succeeding exhibits”.<sup>80</sup> As the display held a significant place in the exhibition’s narrative, it can be understood that the selection process for this exhibit required a delicate balance between physical space limitations and the importance of the materials showcased.

The following concern addresses the ethical dilemmas involved with the material selection of the exhibition. The choice to display materials from endangered or vulnerable species demanded careful consideration and transparent communication with museum visitors and to remedy this, Ehrman made clear that:

“A warning about the inclusion of materials from species which are now critically endangered or vulnerable, which explained that their manufacture predates the legislation that protects these animals today, was placed at the exhibition entrance. Case panels and object labels described why such materials were valued, how they were obtained and if their use was contentious at the time.”<sup>81</sup>

Here, Ehrman illustrates the ethical considerations surrounding the presentation of materials from endangered or vulnerable species in the exhibition. By placing a warning at the exhibition entrance, curators acknowledged the contentious nature of using such materials and sought to inform visitors about their origins and significance. The accompanying case panels and object labels, which provided additional context, reflect an approach by Ehrman, committed to transparency and education, allowing visitors to engage critically with the ethical implications of fashion and material culture.

On a continuation of ethical concern, Ehrman explained that:

“Although the exhibition focussed on fashion’s environmental record, it was impossible to omit any mention of slavery and the abuse of indigenous communities. We did not highlight every instance but referred to slavery in the exhibition text and with images in the context of nineteenth-century American-grown cotton and the collection of latex for rubber in the Amazon rain forest.”<sup>82</sup>

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<sup>80</sup> Ibid., 13.

<sup>81</sup> Ibid., 12.

<sup>82</sup> Ehrman, “Fashioned from Nature”, 13.

This decision not to shy away from uncomfortable truths demonstrates Ehrman's commitment to offering an educative narrative that further struggled to fully contextualise the environmental record of fashion within broader socio-political dynamics. Moreover, by using references to slavery and indigenous exploitation within specific contexts, such as the production of American-grown cotton and latex collection in the Amazon rainforest, the exhibition catalogue reminds the reader of the multifaceted nature of the fashion industry's impact on both the environment and marginalised communities.<sup>83</sup>

In exhibitions that pay attention to sustainable fashion, it is incredibly valuable to gain detailed insight into how curators address the various limitations and difficulties they have had to deal with to achieve a fair evaluation of their work. With *Fashioned from Nature*, the V&A faced several challenges, including figuring out how to balance a representation of fashion and nature, how to make the most of limited exhibition space, and addressing ethical concerns surrounding material selection. The limitations of the exhibition also show the difficulties that come up, exclusive to the museum's capabilities when showcasing sustainably oriented themes of fashion and textiles. By identifying needs for improvement, curators such as Edwina Ehrman have demonstrated a dedication to transparency, education, and critical engagement by acknowledging and evaluating issues such as portraying the environmental impact of fashion and the exploitation of marginalised communities. In acknowledging these limitations publicly, exhibitions like *Fashioned from Nature* can provide a platform for further discussion, education, and reflection.

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<sup>83</sup> Ibid.



## Case Study Two: *Hands On Biofilm!*

In 2022, The Science and Industry Museum in Manchester, UK, hosted an event at the Manchester Science Festival that showcased kombucha, highlighting its potential in sustainable textile initiatives. In 2023, this event was evaluated by the event's administrators Joanna Verran, Jane Wood, James Redfern, Haleh Moravej and Natascha Radclyffe-Thomas in an article called: *Hands On Biofilm!* The event was described by Verran et al. as a multidisciplinary public engagement event that used the kombucha tea pellicle as an accessible example of a biofilm. A British biotechnology company called the National Biofilms Innovation Centre defines biofilms as “made of numerous living micro-organisms, such as bacteria or fungi, evolving and growing as a collective”.<sup>84</sup> In evaluating the event, Verran et al. state the aim was “to raise awareness of kombucha as a sustainable material and the importance of sustainable fashion in the circular economy through conversation and hands-on activities”.<sup>85</sup> As such, the authors have indicated that the event, overall, wished to contribute to the area of sustainable fashion through scientific research, public engagement, and practical applications. However, even with an explicit aim towards promoting sustainable consumption and production patterns (SDG 12), it is still worth considering the potential limitations and broader implications of promoting kombucha as a sustainable material for fashion.

Through an examination of the results obtained by the multidisciplinary approach of the event's administrators, one could gain insights into practical design strategies for encouraging visitor engagement with sustainable materials that further achieve long-lasting sustainability even after the exhibition ends. For Verran et al., it made sense that:

“The obvious cross-disciplinary interests that could arise from considering kombucha as a vehicle for public engagement activities (microbiology, nutrition, fermentation, fashion, sustainability) led to the design and delivery of an event that would engage audiences with biofilm, and that included some hands-on experimental activities which incorporated inputs from across disciplines.”<sup>86</sup>

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<sup>84</sup> NBIC, “What Are Biofilms?”.

<sup>85</sup> Verran et al., “Hands On Biofilm!”, 5.

<sup>86</sup> Ibid., 2.

Verron et al.'s claim that kombucha's interdisciplinary qualities benefitted them exemplifies how diverse areas of interest were utilised to establish meaningful engagements with attendees. This was further interpreted to be successful, as according to the Science and Industry Museum, "more than 1200 visitors attended the event".<sup>87</sup> The interdisciplinary strategy administered provided visitors with a comprehensive viewpoint on the subject, ultimately enhancing the event's participation and interest levels.

The design of the exhibition involved a series of organised activities, each with its designated space within the museum zone, arranged in a '7' shape due to space constraints.<sup>88</sup> Verran et al. describe in their analysis of the event, how the activities commenced with "biofilm-related presenters wearing lab coats and MetMU staff [donning] customised aprons".<sup>89</sup> The exhibition staff's attire could have reinforced sustainability by associating lab coats with research and development, which can be applied to sustainable practices. Customised aprons could have also contributed to the overall premise of the exhibition, perhaps designed to incorporate elements related to sustainability or the specific topic of the exhibition. Additionally, customising the aprons could have created a sense of ownership and connection for hosts or staff, further reinforcing their role as advocates for the exhibition's invitation to be experimental. Overall, the attire of lab coats and customised aprons could have contributed to the overall atmosphere and message of the exhibition, enhancing the visitor experience.

The first activity, led by Joanna Verran, aimed to welcome visitors, outline the event's activities, and distributed postcards containing more details (Fig. 5.). Verran et al. explain how during the event, "Stickers were issued at each of the four activities, and if all four stickers were collected on the postcard, then a prize was given".<sup>90</sup> The postcards also provided a QR code/Flickr weblink for accessing a "dedicated album where results from the citizen science part of the event would be uploaded." The event's quantitative evaluation was conducted based on the number of postcards distributed, stickers collected, and visits to the Flickr website. The exhibition's second activity, led by James Redfern, focused on biofilm education. Final-year undergraduate biology students primarily delivered this station. Their job was to emphasise biofilm concepts through visual aids and hands-on activities. Visitors participated in a 'build a biofilm' activity using 'Model Magic', contributing to a day-long

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<sup>87</sup> Ibid., 5.

<sup>88</sup> Ibid., 3.

<sup>89</sup> Ibid.

<sup>90</sup> Ibid.

experiment (Fig. 6.). Verran et al. reassure their readers that risks were carefully managed, and quantitative data was collected on the visitor's "familiarity with biofilm and [the] number of Model Magic 'cells' made".<sup>91</sup> The subsequent activities involved fabric, fashion, and fermentation, each aiming to raise awareness and engagement in sustainable practices. These stations were led by various authors and supported by project students, with risks managed accordingly.

In assessing the event's evaluation, there were successes and challenges in aligning with sustainable development goals (SDGs). On the positive side, the event attracted significant visitor attendance and engagement, indicating a potential avenue for raising awareness and fostering dialogue around sustainability issues. In terms of qualitative data, Verran et al. said that their data had to rely on "observations: the buzz of activity across the event; the diversity of the morphological forms in the Model Magic biofilm; the thoughtful selection of incubation conditions; the time taken to create fashion designs; the ongoing conversations between family members, and between families and the delivery team".<sup>92</sup> The description by the authors puts emphasis on the time taken to create the event, signifying that the experiments exercised were inventive and that the researchers were willing to explore unconventional approaches to their work. The ongoing conversations between family members and the delivery team indicate that the researchers were interested in communication and collaboration and that they valued the input of a variety of perspectives.

The hands-on activities in the exhibition itself were felt by the authors in their overall observations to have facilitated active participation and discussion among attendees, contributing to SDG 4 (quality education) by enhancing learning outcomes. They claim that "the use of 'hands-on' activities proved effective in ensuring visitor engagement and enjoyment. This was not merely indicated by the extensive use of materials, but also by the conversations and discussions taking place alongside the varying tasks set".<sup>93</sup> While such an evaluation is encouraging, it is important not to ignore that hands-on activities may not be equally beneficial for all learners. Some individuals may have physical or cognitive disabilities that make it difficult to engage in certain tasks, while others may prefer different learning styles. Therefore, it is advisable to provide a variety of learning opportunities that cater to different needs and preferences in similar future endeavours.

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<sup>91</sup> Ibid.

<sup>92</sup> Ibid., 7.

<sup>93</sup> Ibid., 5.

Additionally, the event promoted sustainable consumption patterns, as evidenced by the distribution of fermentation postcards and kombucha drink bottles, aligning with SDG 12 (responsible consumption and production). However, Verran et al. further admit how the activity stations were so busy that “stickers ran out, and the postcards were initialled by those at the stations”.<sup>94</sup> In a sustainable textile event, shortages of materials like stickers and resorting to improvisation with postcards revealed possible issues in planning and managing resources. Though the event saw high attendee engagement, these challenges prompted questions about striking a balance between sustainability and participant experience. The evaluation also highlighted several shortcomings that warrant critical consideration. Despite the event’s success in engaging visitors, the lack of quieter periods and opportunities for reflection among the delivery team suggested a potential imbalance between quantity and quality of engagement. This was realised by Verran et al., who detailed that “the event was busy throughout the day without any quieter periods. Student helpers were enthusiastic, informative and knowledgeable, but it was difficult for any of the delivery team to take time away from the event for reflection or observation - even for refreshment”.<sup>95</sup> The team’s inability to take breaks for reflection or refreshment, despite being on the job for an extended period, signified a lack of foresight or planning on the part of those in charge of the event. This limitation may also catalyse concerns about the event’s long-term impact and effectiveness in fostering meaningful behaviour change, which is essential for achieving SDG 12 (ensure sustainable consumption and production patterns).

Through public engagement activities, the administrators of the event made kombucha and biofilm research accessible to a broader audience, promoting science communication and fostering dialogue between researchers and the public. In engaging with hands-on activities, such as exploring the creation of garments from biofilm (dried kombucha fabric dyed with natural food colouring), visitors were encouraged to design clothing, sparking conversations about sustainable fashion and the circular economy.<sup>96</sup> The study exemplifies that the education of such innovative textiles extends beyond imparting knowledge; it involves cultivating critical thinking skills, promoting experiential learning, and instilling values. It was further claimed that:

“‘Hands-on’ activities are the gold standard for education and for ‘active engagement.’ The mantra of engaging with a student’s head (cognitive), hands

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<sup>94</sup> Ibid.

<sup>95</sup> Ibid.

<sup>96</sup> Ibid., 2.

(practical) and heart (values) is easily translated into events designed to engage with a public audience, enabling consideration of the most effective activities to be implemented.”<sup>97</sup>

Therefore, events that incorporate hands-on activities enhance the experience’s educative quality and encourage active participation and deeper engagement with the material. The tactile experience prompted creativity among participants, drawing attention to innovative materials. By inviting participation and encouraging curiosity, museums can demystify complex textile technologies and generate an appreciation for the craftsmanship and ingenuity behind innovative textile designs.

Despite its disjointed organisation, the *Hands On Biofilm!* event offers insights into the museum’s role in hosting spaces for sustainable textile curation in Europe. By incorporating activities focused on sustainable fashion and exploring innovative materials such as kombucha biofilm, the event highlighted the growing need for attention within the museum sector in addressing environmental and ethical concerns related to textile production and consumption. The support for sustainability shown by this study reflects a comprehensive trend among European museums to engage with and demonstrate leadership in promoting responsible practices within the textile industry. By providing platforms for showcasing production methods that challenge traditional textile design through hands-on activities and interactive displays, visitors were encouraged to interact with the potential of sustainable fashion and consider their choice’s environmental and social implications. “Subjective observations of the audience enthusiasm and engagement show that positive messages about science, scientists and universities – and biofilms, textiles, fashion and fermentation – were transmitted for that day at least, and likely beyond, when the citizens got their ‘HandsOnBiofilm!’”<sup>98</sup> A clear strength of this evaluation is its emphasis on the immediate impact of the event on audience perception and engagement. However, while enthusiasm and engagement from participants are positive indicators, they may not necessarily translate into meaningful changes in attitudes or actions. Verran et al. could have also considered whether the event managed to effectively convey accurate information about biofilms, textiles, fashion, and fermentation and whether it encouraged critical thinking and learnt decision-making among attendees.

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<sup>97</sup> Verron et al., “Hands on Biofilm!”, 1.

<sup>98</sup> Verron et al., “Hands on Biofilm!”, 7-8.

Overall, the event worked well as a promising space for collaboration and encouraged knowledge exchange between the visitors and staff alike. By hosting an engagement with the topic of sustainable materials, The Science and Industry Museum demonstrated its willingness to raise awareness and foster critical thinking about sustainability issues among its public. The event allowed for interdisciplinary dialogue to take place and innovative thinking by bringing together researchers, students, and practitioners from diverse fields. This collaborative approach was therefore likely to help drive forward development in sustainable textile curation practices. Taking this on board, museums can harness their resources and expertise to advance research, education, and advocacy initiatives that aim to promote sustainability in the textile sector through partnerships with universities, research institutions, and sustainable fashion brands. In summary, the event can be used as an example of the potential for success in advancing sustainable development through public engagement and education. Equally important was understanding to what extent the event aligned fairly with the broader goals of sustainable development in museums with the consideration of critical reflections on the event involving its decisions and execution. Learning from experience and welcoming diverse partnerships for improved operative planning and delivery will be useful in maximising the event's future impact on the public and its contribution to advancing sustainability objectives within museum contexts.

### Case Study Three: *The Common Thread*

The exhibition *The Common Thread: The Warp and Weft of Thinking* at the Weltkulturen Museum in Frankfurt, Germany, which ran from November 17, 2016, to August 27, 2017, is another unique case study when researching how museums have interpreted the intersection of sustainable narratives with materials within the context of fashion and textile curation. The exhibition's lead curator, Vanessa Von Gliszczyński, wrote a catalogue for the exhibition called 'Behind the Cloth' in 2018, which discussed how the curatorial aim was to "convey a deeper understanding of textile techniques in relation to contemporary everyday life to a diverse audience".<sup>99</sup> Von Gliszczyński said she took a comparative approach with the exhibition and sought to include features and qualities that connected textile cultures across the globe, further identifying 'textile thinking' as a central theme.<sup>100</sup> By merging concepts of cognitive and practical abilities found in everyday life, the exhibition's main theme shines a light on the universal relevance of textile techniques in human culture. Furthermore, focusing on language, mythology, and cognitive skills associated with textiles, including contemporary artworks and compositions, naturally added a supplementary layer, emphasising the significance of textile techniques in the modern world.<sup>101</sup> Having used a multifaceted approach, *The Common Thread's* aim and central theme as claimed by Von Gliszczyński, suggests it efficiently engaged visitors of all ages and experiences with diverse displays of textile heritage. This case study has, therefore, become an example of textile innovation within a museum that re-conceptualised the purpose and potential of textiles.

In terms of content, the exhibition hosted an estimated 350 objects, mainly from the Americas, Insular South East Asia, Oceania, and Africa. These objects were complemented by photographs and films from the museum's image archives.<sup>102</sup> Including photographs and films from the image archives would have enriched the experience of the exhibition by providing visitors with visual and historical context, helping them better appreciate the significance and meaning of the objects being displayed. Von Gliszczyński explained that unlike the Victoria and Albert Museum, the Weltkulturen Museum does not have a permanent collection, "thus *The Common Thread* was not intended to function as an encyclopaedia of

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<sup>99</sup> Von Gliszczyński, "Behind the Cloth," 150.

<sup>100</sup> Ibid.

<sup>101</sup> Ibid.

<sup>102</sup> Ibid.

textiles and textile techniques but to offer a broad approach to enter textile thinking”.<sup>103</sup> By framing the exhibition like this, the Weltkulturen Museum could have its visitors interpret textiles as more than just material objects or artefacts. Instead, “textile thinking” suggests a deeper consideration of how textiles become involved in influencing identities, cultures, and societies. With this broader approach, the museum had visitors reflect on the interconnectedness of textiles with diverse aspects of human experience.

Von Gliszczyński said the structure of *The Common Thread* followed the production of textiles, from the beginnings of fibres to becoming fabric. She goes on to describe the exhibition, stating:

“On the ground floor, visitors followed the steps of textile production, namely drilling, spinning, dyeing with natural and synthetic colours, and weaving; the exhibition included several types of looms, such as the backstrap loom and Bolivian looms constructed out of branch forks. The connections between weaving, computer technology, and the Internet were also illustrated here.”<sup>104</sup>

Based on this, one can appreciate the lengths to which the exhibition was planned and catered to the foundational comprehension of textile production and development. By showcasing different types of looms, including traditional ones like the backstrap loom and Bolivian looms, the exhibition highlighted the rich diversity of techniques and cultural traditions associated with textile craftsmanship. The exhibition’s exploration of the connections between weaving and modern technologies, such as computer technology and the internet, suggests a further conscious effort to contextualise traditional practices within contemporary circumstances. However, if the goal of the exhibition was set in wanting to convey a deeper understanding of textile techniques in relation to contemporary everyday life, the exhibition may have deterred from this slightly. Notably, in Von Gliszczyński’s rich delivery of retrospective production techniques, she only briefly mentions the use of computer technology and the internet at the end of her description. This contextually heavy display could have undermined the exhibition’s specific aim of exploring the connection between textile practices and modern technological advancements, leaving visitors with less understanding of the chosen subject matter.

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<sup>103</sup> Ibid., 151.

<sup>104</sup> Ibid.



*The Common Thread* held a room where visitors could engage with a weaving loom designed by Travis Meinolf. Von Gliszczynski states that within this display, “it was also important to address the topic of fair and ecological fashion—especially with young visitors—which would have opened up a completely new theme”.<sup>105</sup> This interactive element allowed visitors to directly experience textile production techniques, which improved their understanding of the exhibition’s themes. Additionally, the department organised a film project titled ‘Six Colourful Threads’ involving young adults to raise awareness about textile production and upcycling, addressing contemporary issues of fair and ecological fashion. The inclusion of educational initiatives, such as the film project, may have been able to raise awareness about contemporary issues in textile production, including fair and ecological fashion. In addressing these issues, the exhibition could encourage visitors to consider the importance of innovation in creating sustainable and ethically produced textiles.

When we examine how museums explore textile innovation, we can see that they use a variety of techniques and methods to effectively showcase sustainable stories. Museums often collaborate with textile designers, artisans, and researchers to curate exhibitions that highlight innovative materials and techniques, including upcycling, recycling, and eco-friendly dyeing processes. For Von Gliszczynski’s *The Common Thread*, it was felt that “the key role of textile production in the history of mankind is also reflected in our everyday language, in our idioms, narratives and myths”.<sup>106</sup> One example of this statement in action was when the exhibition team invited Shan Goshorn and Sarah Sense, both Native American artists, to contribute to the exhibition. A space of two rooms was curated by Max Carocci, an anthropologist and curator specialising in the field of Native North American People’s arts and cultures, an involvement that added academic expertise to the curation process. Both Goshorn and Sense were admired for their ability to “employ traditional plaiting techniques and native patterns in their contemporary work”.<sup>107</sup> (Fig. 7.) The sense of heritage and their cultural backgrounds would undoubtedly have represented added layers of meaning to their work particularly in the context of incorporating traditional plaiting techniques and native patterns into their contemporary art. These techniques embedded within cultural identity serve as powerful tools of expression, reclaiming and reinterpreting artistic traditions in a modern context.

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<sup>105</sup> Ibid.

<sup>106</sup> Ibid., 153.

<sup>107</sup> Ibid., 155.

In this example, Von Gliszczyński said Goshorn's take on contemporary basketry involved incorporating "strips cut from photographs or imprinted with quotes or other texts" embedded with political statements.<sup>108</sup> Supposedly, creating a basket with politically charged photographic material would inspire viewers to reflect and act on the ethical implications of their consumption choices. By choosing to support art that addressed political and social issues in a sustainable way, the exhibition displayed art relevant to contemporary society, finding connections between societal consumption habits and cultural values and beliefs. Furthermore, by repurposing photographic material, the artist gave it a new form and meaning. According to Charles S. Whewell, who was Professor of Textile Industries at the University of Leeds, England, and former assistant research manager and author Edward Noah. Abrahart, textile innovation is a pursuit that involves "rapid advances in development of new fibres, processes to improve textile characteristics, and testing methods allowing greater quality control".<sup>109</sup> Innovative textile practices therefore reduce waste and minimise the environmental impact of production by diverting materials from landfills or recycling centres. By promoting resourcefulness and circularity in material use, the artworks in *The Common Thread* exemplified clear principles of sustainability. The artist also encouraged a more sustainable approach to consumption by creating artworks that contributed to positive social change and environmental stewardship.

According to Whewell and Abrahart, "textile structures derive from two sources, ancient handicrafts and modern scientific invention. The earliest were nets, produced from one thread and employing a single repeated movement to form loops and basketry, the interlacing of flexible reeds, cane, or other suitable materials".<sup>110</sup> With this in mind, the fusion made by Goshorn and Sense of traditional craft with contemporary materials and themes adds depth and relevance to their work. "By interweaving several layers of meaning, the two artists visualised and restored the original sense of the word *texere*".<sup>111</sup> Textiles and baskets are seen in this context not only as utilitarian objects but also as artefacts that hold significant cultural value; they seem to be deeply entangled with the identities and histories of the communities that produce them. Through this comparison, visitors were encouraged to consider the similarities and differences in the materials, methods, and motifs employed in

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<sup>108</sup> Ibid.

<sup>109</sup> Whewell and Abrahart, "Textile".

<sup>110</sup> Ibid.

<sup>111</sup> Von Gliszczyński, "Behind the Cloth", 155.

these two crafts, thus gaining a deeper understanding of the cultural practices and traditions they represent.

As *The Common Thread* has shown, acknowledging textiles as a medium that pushes the boundaries of craftsmanship, materials, and techniques can help motivate museums to use fashion and textile exhibitions to promote sustainability, environmental awareness, and visitor engagement, making way for long-term and enduring influence. This involves recognising curatorial efforts that showcase pioneering fabrics and techniques, for example, early examples of synthetic fibres or groundbreaking weaving methods, as well as contemporary textiles that incorporate sustainable materials or cutting-edge technologies. The exploration of textile innovation in museums thrives on creative possibility, which then offers a platform for exploration, experimentation, and boundary-pushing initiatives in sustainable design. The challenge for Von Gliszczyński in creating a platform that wanted to achieve all the above involved visualising “the connections between textile techniques, language and mythology as well as the interaction of hand-eye-coordination and cognitive skills”.<sup>112</sup> Textile techniques involving tangible skills and processes would have done well when juxtaposed with abstract concepts like language and mythology because they add depth in meaning and may have allowed for enhanced interpretation. When discussing the challenge of bringing together visual connections for the central theme of the exhibition (textile thinking), Von Gliszczyński said she wanted to employ an interlocking approach as a solution, utilising different levels of text to guide visitors through the exhibition’s themes. This included wall texts that provided general overviews, display labels offering more proficient insights, and a booklet focusing on selected objects with individual stories.<sup>113</sup> Providing different levels of text in an exhibition caters to diverse audiences by offering tailored content for varying levels of interest and knowledge. It also supports different learning styles, might help with navigation, and encourages exploration, ultimately creating a more inclusive and enriching museum experience. According to Von Gliszczyński, “the most detailed level was the catalogue to the exhibition, which served as a reader into the topics addressed in the exhibition and could also be read separately”.<sup>114</sup> The use of multimedia presentations, including films and catalogues, is a proactive way of strengthening a holistic exploration and evaluation of textile innovation, suggesting visitors think critically about the future of textiles.

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<sup>112</sup> Ibid., 151.

<sup>113</sup> Ibid., 152.

<sup>114</sup> Ibid.

The concept of textile innovation in museums intersects with the broader research findings of this thesis, which investigates the relationship between sustainable narratives and material value in textile curation. Textile innovation encompasses a range of practices and methodologies aimed at advancing sustainability, from exploring eco-friendly materials to implementing circular fashion initiatives. Peter Majeranowski, the CEO of textile recycling firm 'Circ', defines circular fashion as “apparel, footwear, or accessories that are thoughtfully and responsibly designed, sourced, produced, and distributed with the intention to be maintained at their highest value, with the ability to be reused, remade, or recycled”.<sup>115</sup> Within museum contexts, innovative actions like circular fashion and materials are emerging as a growing area of interest, reflecting the sector’s evolving commitment to environmental consciousness and promoting material continuity.

Actively incorporating ideas about textile innovation into conversations surrounding sustainable practices, museums educate visitors about the environmental impact of textile production and consumption, encouraging them to adopt more sustainable behaviours. By now, it should be quite clear that the production and consumption of textiles contribute significantly to environmental harm, from using toxic chemicals to generating enormous waste. From recycled and upcycled materials to sustainable production methods, museums can showcase exciting technologies and pioneering designs that illustrate how textile innovation can help combat environmental issues and promote sustainable thinking. In Pop et al.’s evaluation of ‘Achieving Cultural Sustainability in Museums’, it is explained with a sense of optimism that “through their exhibitions and their involvement in discussions and debates regarding climatic and environmental changes, museums have the capacity to influence people’s attitudes towards their natural environment”.<sup>116</sup> Given the gravity of the climate crisis, it is rather urgent that museums use their position as trusted sources of information to inspire action towards a more sustainable future. By curating exhibits and questioning sustainable goals, museums can spark both outer and inner interest in climate action and hearten the adoption of sustainable behaviours.

By encouraging interdisciplinary approaches and embracing unconventional materials and techniques with cultural value, museums like the Weltkulturen Museum discover and facilitate the potential of sustainable textile design. An emphasis can be made on how creative possibility drives artistic expression and the development of practical solutions to

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<sup>115</sup> Chong, “The Future of Fashion is Culture”.

<sup>116</sup> Pop et al., “Achieving Cultural Sustainability in Museums”, 2.

environmental challenges, ultimately paving the way for a more sustainable future for textile practices in museums.

## Conclusion

In conclusion, this paper has explored finding answers to how museums in recent years have made efforts to cultivate environmental consciousness and utilise sustainable textile practices. It has done this by looking into which specific strategies, plans and curatorial practices museums have implemented in recent years to effectively ensure long-term influence on visitors, particularly in the context of textile and fashion curation. Through the assessment of three unique case studies and using sustainable development goals as a method of completing this assessment, this research has hopefully contributed to the field by deepening an understanding of how museums have found ways to integrate sustainability into their practices and taken progressive action within their communities and cultural societies.

Fashion exhibitions in museums like the V&A's *Fashioned from Nature* have been productive in activating conversations in museums about revisiting and re-imagining permanent collections in the pursuit of sustainability. Some institutions, like the Science and Industry Museum in Manchester and the Weltkulturen Museum in Frankfurt, took further steps to reimagine traditional exhibition formats by incorporating elements of participatory design, co-creation, and community engagement, empowering visitors to actively contribute to the conversation on sustainable fashion. Through these innovative curatorial approaches, the museums presented in this thesis have shown a willingness to transform exhibitions into immersive learning environments that inspire environmental consciousness and collective action while redefining the boundaries of textile and fashion-based curation.

While the *Fashioned from Nature* exhibition was a step in the right direction, the V&A Museum must prioritise efforts to create environmental consciousness and inspire active visitor participation if it hopes to remain relevant and effective in the years to come. The V&A's strategic objectives seemed to align with most of its founding ideals, but it needed to do more to ensure that its operations and outreach efforts were truly efficient, accessible, and inclusive. Without these measures in place, the museum may still struggle to secure stable funding and support for ongoing and future exhibitions that promote sustainability and environmental awareness. The financial report for the *Fashion from Nature* exhibition year revealed that from 2018 to 2019, the V&A museum had several objectives which reflected some of the principles reflected in the case study. However, upon closer inspection, it has become clear that the museum's primary objective is to increase visitor

numbers and expand outreach efforts to diverse local and global audiences rather than to prioritise sustainability. This might be due to the museum's large size and the resources required to maintain it.

Overall, the exhibition's acknowledgement of the challenges in balancing representation, navigating space constraints, and making ethical material choices underscored the complexities of showcasing sustainable fashion. The exhibition, with its clear curatorial intentions, illustrated primarily by the exhibition's catalogue supported by Edwina Ehrman, showed its intention towards collaborative design, and made choices to introduce designers and celebrities experimenting with eco-friendly materials and innovative production techniques making it a highly relevant case study. The content of this exhibition far outweighed the other case studies, which might have been due to the V&A's financial privileges and publicity advantages.

The *Hands On Biofilm!* case study concerned with recognising kombucha as a versatile material for cross-disciplinary engagement indicated a proactive approach to promoting collaboration and dialogue across different fields of study. The advantage that kombucha had being relevant beyond microbiology and fermentation meant that the programme could also cover nutrition, fashion, sustainability, and other fields, embracing an interdisciplinary perspective that encouraged collaboration among experts from different domains. The decision to organise an event that engaged audiences with biofilm through hands-on experimental activities showed a commitment to a holistic engagement. The event provided participants with tangible experiences that also deepened their sensory understanding of the subject matter. Furthermore, by incorporating input from diverse disciplines, the authors highlighted kombucha's cross-sectoral relevance and potential to drive innovation across numerous industries. However, the event may have had a limited educative and inclusive impact as it could have only attracted individuals who were already interested in sustainable fashion and the hands-on activities at the event may not have been accessible to everyone. Overall, the event highlighted the growing need for attention within the museum sector to address environmental and ethical concerns related to textile production and consumption.

The exhibition *The Common Thread*, shown at the Weltkulturen Museum in Frankfurt, had an ambitious and inclusive aim to offer a broad approach to textile thinking. By inviting Native American artists Shan Goshorn and Sarah Sense to contribute to the exhibition, the museum exemplified inclusive efforts by incorporating their cultural

narratives and traditional craft techniques into the display. This added depth and relevance to the exhibition and formed a key understanding of the cultural significance of textiles and their intricate ties to identity and history. Furthermore, by having demonstrated pioneering material and techniques, both historical and contemporary, museums like the Weltkulturen Museum created platforms for exploration, experimentation, and boundary-pushing initiatives in sustainable design. Von Gliszczyński faced the challenge of connecting tangible textile techniques with abstract concepts like language and mythology, employing different levels of wall texts and multimedia presentations to guide and educate visitors. This approach was another clear attempt at a holistic understanding of how to present innovative textiles within a museum context. However, the exhibition also had some notable limitations. One of the key issues discussed was the broad, thematic approach taken on by the museum, which may have resulted in a lack of depth or detail on textile techniques and capabilities. This, in turn, may have led to a lack of understanding or appreciation of the nuances of certain textile practices, straying away from maintaining attention to artworks like those of Goshorn and Sense. A lack of specificity could have made it challenging to maintain a consistent focus, which would ultimately result in a scattered or unfocused appreciation of content.

The focus on European museums in this paper was not intended to diminish the efforts or significance of sustainable curation initiatives in museums outside of Europe. Instead, the spotlight on European museums is a result of the historical, cultural, and institutional contexts present in this region, which have offered valuable insights and exemplary practices for the exploration of sustainable strategies and curatorial practices. Additionally, the availability of literature, case studies, and resources explicitly interested in sustainable textile curation in European museums allowed for a more comprehensive examination within the confines of this paper. It is acknowledged that sustainable curation is a vast and global endeavour, and future research should aim to include a broader geographical and cultural spectrum to give a more inclusive understanding of this critical topic.

Museums can educate and invite visitors to make more environmentally conscious decisions through exhibitions that inform them about the sourcing of materials, the manufacturing process, the use of the garment, and, if applicable, the recycling capabilities of materials. Additionally, exhibitions can serve as platforms for advocacy and activism, providing opportunities for people to learn about environmental movements, support initiatives for systemic change, and become advocates themselves for sustainable fashion practices in their own communities. Despite the museum industry's ongoing announcements and efforts to go green, it is unlikely to reach its desired changes all by itself.



## Figure Appendix

Goal number	Description
1	End poverty in all its forms everywhere
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3	Ensure healthy lives and promote well-being for all at all ages
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5	Achieve gender equality and empower all women and girls
6	Ensure availability and sustainable management of water and sanitation for all
7	Ensure access to affordable, reliable, sustainable and modern energy for all
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10	Reduce inequality within and among countries
11	Make cities and human settlements inclusive, safe, resilient and sustainable
12	Ensure sustainable consumption and production patterns
13	Take urgent action to combat climate change and its impacts
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development

Figure 1: Image of a table presenting the 2015 United Nations SDG indicators, last assessed in 2017

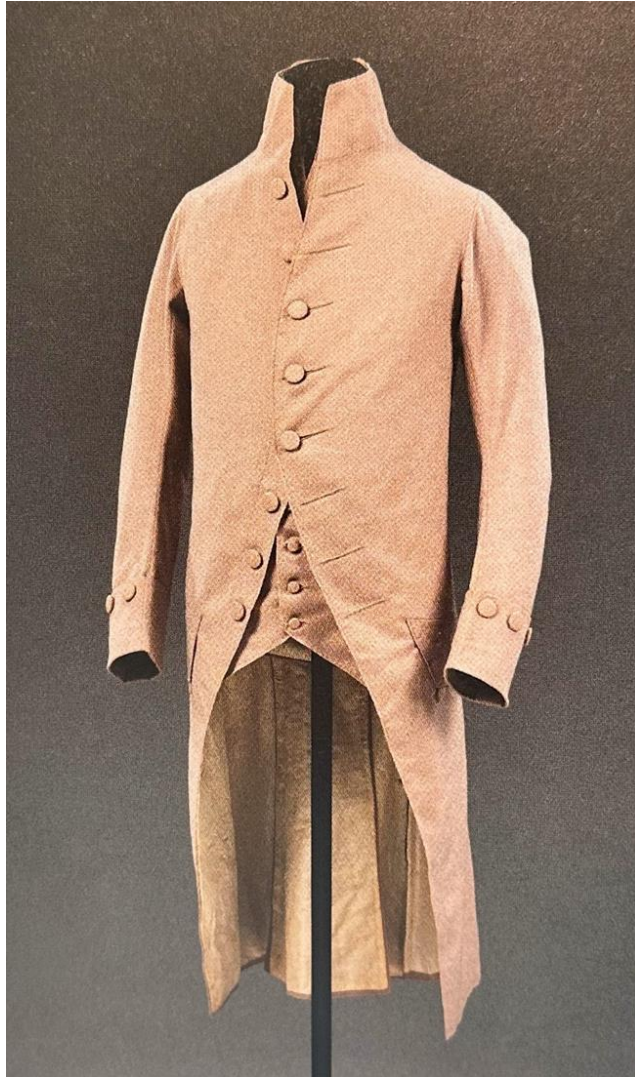


Figure 2: Coat and waistcoat. Wool. Britain, 1795-1805. Victoria and Albert Museum, 2015.



Figure 3: Reiko Sudo, dress and coat, raw and kibiso silk, Japan 2017. Kibiso silk is made from the protective outer surface of silk cocoons. Donated by the designer. Victoria and Albert Museum.



Figure 4: A display about cotton and cotton manufacturing in nineteenth-century Britain, with an image of cotton pickers in Savannah, Georgia, USA, c.1890, on the object label in the foreground. Victoria and Albert Museum.

a



b.

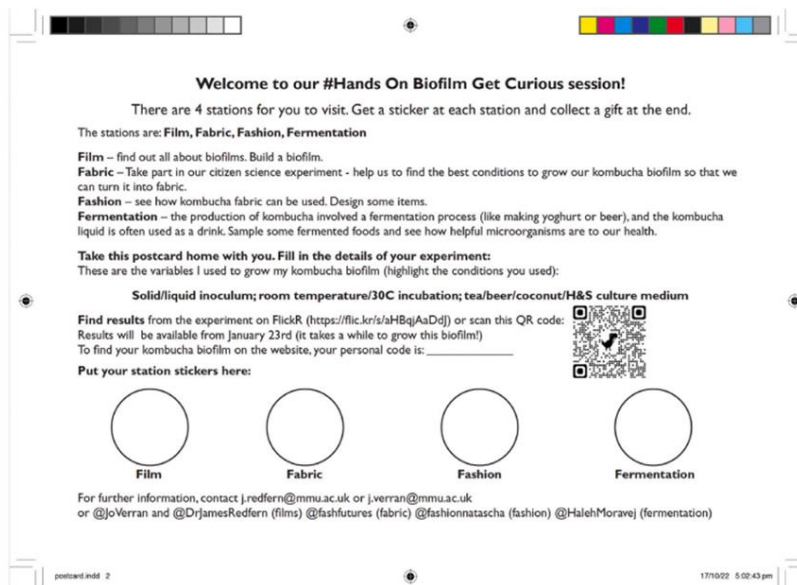


Figure 5: Postcard given to visitors at the Hands On Biofilm event – front (a) and back (b) views. Images by: Jane Wood and Norton Robinson.



A collection of colorful, hand-molded clay figures and shapes, including a pink and yellow striped figure, a blue figure, a green figure, a yellow figure, a blue figure, a green figure, a yellow figure, a blue figure, a green figure, a yellow figure, a blue figure, and a green figure.

A collection of colorful, knitted or crocheted toys, including a large orange and yellow one, a purple and blue one, and several smaller ones in various colors, arranged on a dark surface.

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Figure 7: Shan Goshorn at *The Common Thread* exhibition, in front of displays titled 'Trauma' (left) and 'Values' (right) shows her baskets with interweaving traditional patterns, contemporary materials, and texts.  
Photo: Wolfgang Günzel, 2016.

## Figure Credits

Fig. 1. Rosen 2017, 2.

Fig. 2. Ehrman 2018, 31.

Fig. 3. Ehrman 2020, 13.

Fig. 4. Ehrman 2020, 11.

Fig. 5. Verran et al. 2023, 4.

Fig. 6. Verran et al. 2023, 7.

Fig. 7. Von Gliszczyński 2018, 156.



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