a journal by the student conservators @ melbourne
vol. 2 (November 2022)

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About
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Acknowledgement of Country

This issue of *Scroll* was assembled on land of the Wurundjeri and Boonwurrung peoples. The editors of *Scroll* pay their respects to the Traditional Owners, past and present. We accept the invitation of the *Uluru Statement from the Heart* and support a First Nations Voice to Parliament enshrined in the Australian Constitution.

https://ulurustatement.org/

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contents

This volume's cover

Our cover artwork is adapted from the photograph below by Lyle Fowler (Commercial Photographic Co.) on 20 August 1947.

It depicts a display on appreciation of art. which includes mounted drawings and statues at the Melbourne Technical College (RMIT today).

It is a humbling reminder of the continuity of arts and humanities scholarship in this city.

Image from the Harold Paynting Collection, State Library of Victoria. Learn more at: [State Library of Victoria]

from the editors

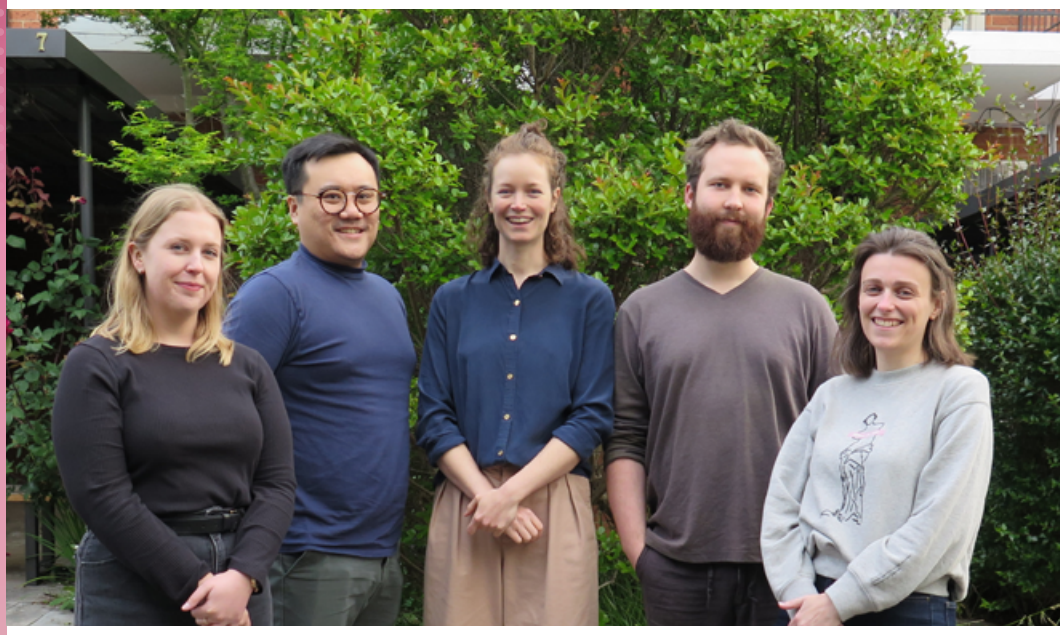

Image
Your editors (left to right) Emily, Josh, Emma, Jonathan, and Rachel. Photograph taken on 2nd November 2022, during the team's weekly meeting

Welcome to Volume Two of **[scroll]**.

Scroll is a space for conversations about cultural material, its study and preservation; it is a platform for critical and creative writing, supported by constructive editorial feedback. Through *Scroll*, we call on our peers to share what it is that drives them.

The pilot edition of *Scroll* emerged out of the uncertainty of the COVID-19 pandemic and we are pleased to report that its reception was immensely positive. Following this success in establishing the journal, we looked towards laying the groundwork for this and many future volumes. We began 2022 by welcoming two new editors: Jonathan and Emily. We also worked on building a guiding principles and terms of reference for the journal, to ensure continuity and clarity of purpose for future editorial teams.

In the past twelve months, the *Scroll* community has strengthened in two noticeable ways — in this edition, we are proud to present our first articles from international contributors; we are also pleased to have had more frequent face-to-face interactions with local authors. We are very grateful to all of our contributors for their expertise, enthusiasm and trust. This edition includes nine thoughtful and engaging articles on a diverse array of conservation's aspects, which we trust our readers will enjoy.

Without further ado, we invite you to... scroll on.

Your editors,
Emma, Rachel, Josh, Emily and Jonathan

foreword

Alice Cannon
is a paper, photographs and preventive conservator by training. She is also President at the Australian Institute for the Conservation of Cultural Material (AICCM). Alice has worked at a variety of cultural organisations including State Library Victoria and Artlab. She is currently Manager, History and Technology Collections at Museums Victoria.

Alice regularly demonstrates her interest in conservation writing and publishing. Her interests include collection risk management, the deterioration of plastics in museum collections, data collection and analysis, the conservation of comics, and 19th and early 20th century adhesives.

Learn more about Alice's work at:
[https://au.linkedin.com/in/alice-cannon-75405417a]

Image credits
Source: Museums Victoria
Photographer: Rodney Start

Writing and publishing prose is often not seen as essential to a career in conservation, as it is in some other professions. Where (say) a scientist or historian must publish in order to attract funding, advance their career, or simply to give their work a life outside of their own mind, the fruits of our labours are generally more tangible. Our work is on display in exhibitions, made available in reading rooms, used for community events, returned to grateful owners, digitised for online access, or has influenced how those previous activities occur. Outside of universities, it would be rare to find a job description in conservation requiring the incumbent to 'publish'. And, when you work in a job that doesn't consider it a requirement, it's hard to find time for writing.

Yet so many of us do, allowing us all to draw on the collective knowledge and expertise of generations to help solve problems now. And, the information contained within professional writing goes beyond its stated subject matter — for example, embedded within a typical 'problem/investigation/solution' paper are the professional attitudes and values of the time, decisions limited by available technology, power structures, unconscious biases, sometimes even language we would now consider offensive. We can see how our practice has changed along with society.

We can also sometimes see how the personal has affected the professional. What I most enjoy about *Scroll* is the opportunity it provides to emerging conservators to stretch both their personal and professional writing craft. While the *AICCM Bulletin* is an excellent outlet for professional writing (and I hope everyone reading has plans to submit a paper one day), *Scroll* allows authors to engage more creatively with their work — to include feelings, sensations and memories alongside facts and observations, and the freedom to intertwine (say) past experiences as a scientist or historian with their current professional pursuits. *Scroll* provides an opportunity to write as 'I' or 'we' instead of the strangely incorporeal and detached third person voice required by most conservation journals.

I congratulate the editors of *Scroll* for creating a new and exciting publication, and I look forward to the new voices I will read within its pages.

Alice Cannon
President, AICCM
October 2022

Conversing with artefacts:
Observations from a manuscript healing place in Istanbul

by Aslı Günel
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Aslı has a BA and MA in Sociology. She is in her second year of the Master of Cultural Materials Conservation course at the University of Melbourne. Aslı is a passionate qualitative researcher who is infinitely curious about things, people and life. She hopes to work with communities as part of her conservation practice and to keep asking questions.

I sigh as I walk under the remains of the Aqueduct of Valens, built in the 4th century AD. It is overshadowed by residential buildings and inundated by mobile base stations. As I navigate the constant stream of fellow Istanbulites on the footpath, I feel the city heave with its sixteen million inhabitants. A construction boom to cater to the needs of this ever-expanding population has resulted in extensive destruction of built heritage and displaced the communities who resided in these historic neighbourhoods. As such, living in Istanbul can be an experience of daily and steady heartbreaks if one cares about heritage. But today I am optimistic because I am on a mission to meet the dedicated team at Kitap Şifahanesi — the Manuscript Hospital.

Figure 1: The stone arch structure is part of what remains from the Aqueduct of Valens, or Bozdoğan Kemeri, neglected and overshadowed by buildings and mobile base stations on Süleymaniye Street. Image by the author, February 2022.

Let us start with the name which has a poetic old-school ring. Şifahane is a composite word: 'şifa' means 'healing/wellbeing' and 'hane' means 'place', whilst 'kitap' means 'book'. Therefore, 'Kitap Şifahanesi' literally translates as 'the place of healing for books'. The people who work here prefer the short version, 'Şifahane', so that is the name I will use for the remainder of this article.

Meeting the team…

The Şifahane team works in a renovated heritage building at the end of a narrow cobblestone street in the Süleymaniye neighbourhood of Istanbul. I pause for a moment to take in the architecture, gleaming white in the winter sun, then march in to meet Nil Baydar, who is at the helm of this conservation powerhouse.

Nil and her team are tasked with researching, monitoring and caring for the 250,000 manuscripts and 300,000 rare, printed books held by various libraries in Istanbul and beyond. The institution has a staff of around fifty conservators in addition to a team of chemists and biologists. Şifahane, as part of the Türkiye Manuscript Institution, is state-funded and well-resourced. There are chemistry and biology labs, the whole gamut of analytical instruments, and even in-house photographers who document the before-during-after of manuscript treatments. Annually, the team sends out experts to libraries that hold Ottoman manuscripts and decide which manuscripts are most in need of conservation, after consulting with library staff and surveying the collection. They plan the whole year based on the selected manuscripts and get to work under the watchful eyes of Nil, who espouses a treatment philosophy based on what Muñoz Viñas describes as 'gentle decisions and sensible actions' (2005, p. 212).

Nil is very generous with her time and patiently answers my questions about heritage conservation in Türkiye. I am then assigned to Serpil Kaya — one of the conservators — who takes me around and introduces me to various teams. Everyone is welcoming and passionate about what they do. Once the tour is over, I propose to sit quietly in Serpil's room which she shares with two other conservators. I want to be a fly on the wall and take it all in.

Figure 2: Şifahane is located in this faithfully renovated heritage building. Image by the author, February 2022.

Figure 3: Dry treatments are undertaken outside the labs in treatment rooms shared by groups of conservators. Image republished with permission from the website of Türkiye Yazma Eserler Kurumu Başkanlığı/ Türkiye Manuscript Institution, 2022.

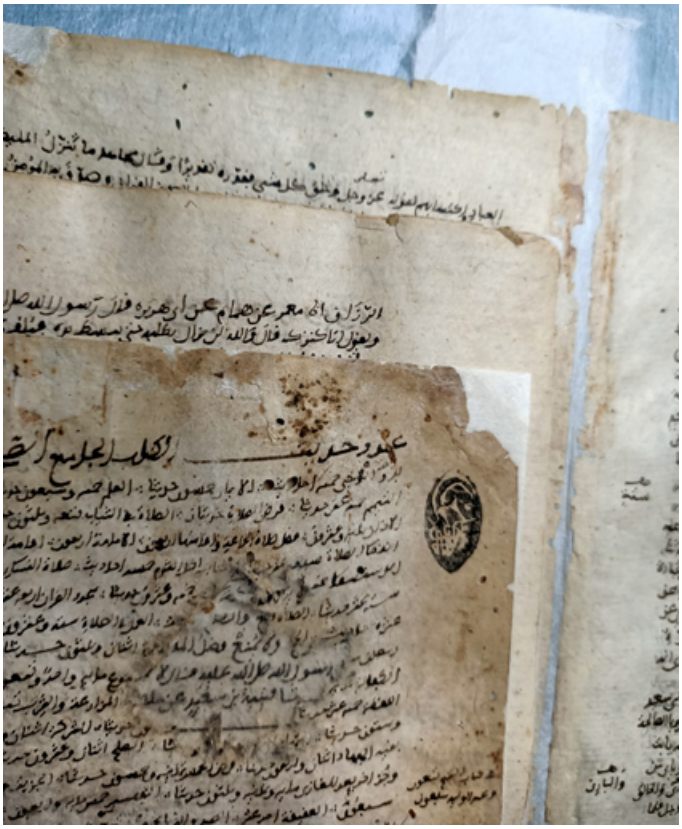

Figure 4: (Top & bottom) The personal stamp of Sultan Mehmet II the Conqueror on two of the manuscripts from his personal collection. Images by the author, February 2022.

Sitting quietly...

Serpil's team is working on the personal manuscript collection of Mehmet II the Conqueror — the Ottoman sultan who conquered Constantinople in 1453 at the age of 21. He is one of Türkiye's most beloved historical figures, a man of science and art, tutored by prominent scholars of his time, and known to be well-versed in philosophy, religious law, geography, mathematics, astronomy and poetry (Akkaya, Bildiren & Akmeşe 2020, pp. 437–449). To be in the same room with his manuscripts feels surreal. My heart flutters when I see his personal stamp on one of the manuscripts.

Yet, for my new friends (as I've decided already that these are my people), this is what they do, day in and day out. They appear so confident and relaxed as they perform the necessary repairs on these works of art, which are exquisite and also extremely fragile. So, I am immediately intrigued when I hear Serpil talk about how tricky endbands are, and how she always asks someone else to watch over her shoulder when she needs to make a new endband for a manuscript — 'you know… just to make sure I start it right!'

I decide to be a fly who asks questions.

Asking questions…

I hold six semi-structured interviews with Şifahane conservators. The interviews are conducted in a relaxed conversational manner, often with other conservators in the room chiming in to make comments. As an emerging conservator who is yet to develop advanced hands-on skills, I am primarily interested in the process of haptic skills acquisition.

Four themes emerge from these conversations. This is by no means a comprehensive account or does not purport to represent conservation standards in Türkiye — or even at Şifahane. Rather, the themes are glimpses from the personal journeys of the interviewed conservators.

'When I first started working here, I had theoretical knowledge of the material and techniques, but I was still afraid. After two to two-and-a-half months, I began to make treatment decisions but always checked them with my supervisor.'

— Betül Engin

Starting small and progressing to complex skills in time

Chris Caple (2000, pp. 1–11) observes that learning happens in 'an iterative manner', as knowledge and skills are built on cycles of trial and error. Schemata or patterns of understanding are formed as a result of sustained practice. Thus, an experienced conservator looking at an object through the lens of their mental schemata can discern what fits the pattern and what does not. This enables the experienced conservator to examine the object without getting lost in the details and make appropriate treatment decisions. The mental schemata develop hand-in-hand with practical skills, which progress from basic, to intermediate, to proficient, before reaching the level of expert (Corr et al. 2011, p. 24). All of this to say that it takes time to be a competent bench conservator!

Şifahane conservators corroborate the theory. Simpler and less risky tasks such as infilling with remoistenable tissue are learnt more readily than tasks requiring higher levels of precision, such as paring leather with a scalpel. They have a common language for passing a threshold and obtaining competency; it is referred to as 'breaking the hand'. It is described as a tangible shift when the brain and the hands start working together in harmony and the mental processing of the object happens with relative ease. This does not imply that the learning and progress stop, but signals a milestone where trepidation transforms into flow.

'The cooling of the hand is a thing. It is the same for surgeons. When practical work is paused, the hand skills, tool affinity and reflexes suffer. It takes time to warm your hand and regain those skills.'

— Nil Baydar

The threshold is reversible — how to keep your hand 'warm'

Jonathan Ashley-Smith argues that hand skills and confidence decline as a result of limited bench work. He cites excerpts from expert conservators who report losing their intuition and 'muscle memory'— the tacit knowledge of how to handle objects and tools — after a period of being away from the bench. Ashley-Smith asserts that the decline of haptic skills can be detected in as little as two weeks following cessation of active practice (2016, pp. 127–128).

Nil is well-aware of the risk of losing the embodied knowledge of manuscript care. As a top-tier bureaucrat, she is not expected to do any bench work but can often be found bent on a manuscript surrounded by conservators to diagnose an adhesive or support a tricky step of the treatment. She tells me that she makes a conscious effort to actively practice her hands-on skills to complement the explicit knowledge she imparts onto her team of conservators. Thus, haptic skills not only progress in time but need to be put to active use to maintain them.

‘Someone discovers a new manufacturing technique in a manuscript, and it becomes lore spreading like wildfire among the conservators.’

— Serpil Kaya

Figure 5: The inner courtyard at Şifahane. A conservator is out, reading a book during her break despite the winter chill. Image by the author, February 2022.

The watercooler moments and the cautionary tale of the introvert

According to the Community of Practice (CoP) model, we do our best learning when situated within a group of people who have shared interests and tackle similar challenges. A community of practice builds knowledge and expertise through social interactions (Salem Press Encyclopedia 2020). It is not hard to see the CoP model at work at Şifahane. A sense of community is firmly rooted in Turkish culture, which makes sharing knowledge and experience with fellow conservators a natural extension of social engagement.

The architecture at Şifahane further aids knowledge exchange, as there are several common areas, like the inner courtyard and the kitchen, where the team congregates during breaks. However, an anecdote shared by conservator Kübra Akyüz demonstrates that the most effective means of knowledge sharing happens within one’s immediate team. Hers is the cautionary tale of the introverted novice who elected to work in a little room, as part of a team of two. Every time she needed advice, this emerging conservator would ask an experienced conservator from a bigger team to come over to inspect the object, but this was not always practical. As a result, her learning progressed at a slower pace than conservators working as part of bigger teams. This highlights the importance of actively creating opportunities for social interaction with fellow conservators, and of generosity in the exchange of knowledge and experience.

'Think of the manuscript as a child who doesn't know how to talk. The manuscript talks to you through the deterioration and its structure.
As a conservator, the onus is on you to gather the knowledge and skills to understand what the object is telling you. Then it becomes a dialogue, and you can help a friend who is in need'.

— Gizem Erdem

How to converse with a manuscript in its own tongue

The human brain is hardwired for connection and conservators are a unique group of people who build deep and meaningful connections with physical objects. The anthropomorphic language used when conservators refer to an artifact 'behaving' in a certain way is a telling sign of this connection with inanimate objects. This was a strong theme expressed evocatively by Şifahane conservators. As one builds their skill set and theoretical knowledge, conservation treatment becomes a process akin to a dialogue between the conservator and the object. This level of 'unconscious competence', associated with high performance and driven by intuition in the tacit non-verbal realm must be emotionally rewarding for conservators, as hinted by the expressive language used to describe the process (Ashley-Smith 2016, p. 121).

Conclusion

The acquisition of haptic skills happens over time, but Şifahane conservators offer advice to help aid and accelerate this natural process. The one key piece of advice they agree on is creating opportunities for practice. They suggest practicing skills on discarded materials like leather cut-offs or on ordinary objects such as newspapers and old books. Another valuable suggestion is to learn about manufacturing techniques by building models and having a go at traditional crafts used in the making of the manuscripts. The process of making an object unveils a deep understanding of the components and how they are interlinked; this is especially true for a complex object such as an Islamic manuscript. Last but not least, they recommend staying close to experienced conservators, being curious and asking lots of questions.

I leave Şifahane inspired. The conservators gifted me with a glimpse into the wondrous world of conversing with centuries old artefacts. They ask in their silent but powerful way to be treated with respect and care. Feeling humbled and awed by the three days spent at the manuscript hospital, I walk into a second-hand bookshop at the heart of the historic peninsula, and walk out as the proud owner of a single, partially torn page of manuscript.

I intend to practise.

TRANSLATION NOTE

All featured quotes in this article, attributed to Şifahane conservators, were translated from Turkish by the author.

ACKNOWLEDGEMENTS

I am genuinely grateful to Nil Baydar, Serpil Kaya, Betül Engin, Kübra Akyüz and Gizem Erdem who generously shared their knowledge and expertise with me.

I would like to extend my heartfelt gratitude to Paul Hepworth who was incredibly generous with his time and knowledge.

The *Scroll* editors have been wonderful in their guidance and support every step of the way. Their suggestions were invaluable in shaping the article.

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Conserving queer heritage

by L J Lupgens
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L J Lupgens is a first-year postgraduate student at the University of Melbourne completing a Master's degree in Cultural Material Conservation at the Grimwade Centre. Their particular interest and expertise lies in queer and women's heritage in fine art, and the complexities of the conservation of this cultural heritage.

[Editors' note]
L J discussed the conservation of queer heritage in assignments submitted to the University of Melbourne.
Their ideas were substantially re-worked for publication in *Scroll*.

Cultural heritage can create a sense of belonging and identity for those within a culture. It is part of a particular narrative belonging to a specific group of people. In Western countries, such as Australia, this is especially important when the community is marginalised and does not quite fit into the grander narrative perpetuated by Western cultures rooted in cis-heteronormativity, like the queer community. Queer cultural heritage, and its corresponding culture and narratives, creates a sense of family. This sense of family is an essential aspect of the queer identity as it creates a sense of belonging, a stark opposite to the often alienating and lonely position queer people find themselves in within their immediate families and close circles. This essay will argue that queer cultural heritage must be conserved as it helps create queer identities and a sense of belonging. Conservators have a responsibility to care for queer cultural heritage, to ask questions about their conservation projects and to push the heteronormative boundaries of their workplaces. This essay will start by exploring the connection between cultural heritage and the formation of identity. Then, queer theory and queer cultural heritage will be discussed: what makes queer cultural heritage queer? The essay finishes with discussion on the role of the conservator.

Forming identity through cultural heritage

According to psychologist, Dr Alan S Waterman (1984), an identity can either be created or discovered. It comprises beliefs, values, and goals to which a person is committed, and these evolve throughout one's life (Waterman 1984, p. 331). Human geographer Dr Charishma Ratnam (2018, p. 1) brought forth that 'identities can be built through individual, familial, and collective practices, traditions, or narratives'. Ratnam's proposal of how an identity is formed falls under Waterman's creation argument. One would actively have to seek out and/or (re) create these 'practices, traditions or narratives' for them to become a part of one's identity. However, Waterman's discovery and Ratnam's building identity theories are not mutually exclusive. An identity is not merely a collection of external influences upon someone. One does not create a queer identity; through self-reflection, one discovers that

this is a part of oneself. The queer identity can then be strengthened by Ratnam's proposal of building identity by seeking out and participating within the queer community and interacting with its traditions, practices, and narratives.

One method of strengthening a discovered identity is to interact with cultural heritage. Professor of archaeology, Cornelius Holtorf (2018, pp. 647–648), places heritage's value in its connection to and function within society. Heritage can provide its culture with a sense of history and connect people to this history; having this unites a culture, provides comfort and support when needed. This increases a community's resilience and ability to withstand disturbances (Holtorf 2018, p. 641). A collective history also affects the individual on a personal level. Feminist and queer theorist Douglas Crimp (Fanny Knapp Allen Professor of Art History and Visual and Cultural Studies) discusses queer film and the importance of queer art as it subverts all sexual identities and its normalisation. To him, that is what counts most, and not necessarily that 'it reflects or refers to a historical gay identity and thus serves to confirm my own' (cited in Doyle 2006, p. 394). Nonetheless, the cultural heritage with which he has been able to interact legitimised Crimp's identity and provided him with a place within the history of his culture. On the surface, it might appear as an experience, a movie to watch, a museum to visit, but on a more profound level, this creates an intangible sensation of identity and belonging (Ashworth 1994, p. 20). It is precisely the intangible sensation of identity where the discovery and creation of identity theories overlap. The initial discovery of a queer identity had already been made, but the recognition of it through an interaction with queer cultural heritage is what solidified it.

This is why the conservation of queer cultural heritage is necessary. Holtorf's theory about the connection between a culture's interactions with its heritage and its resilience is especially important for communities that are marginalised, vulnerable or not geographically bound to a place (2018, p. 641). The queer community falls into these categories. There are cities or neighbourhoods that are considered queer places where many LGBTQIA+ people live and interact, where the queer culture might be the dominant one, but there is no state, country, or continent which is considered queer, not in the way that a country is part of a continent, and its inhabitants have a shared national culture and identity. This puts queer culture at risk of being pushed even more into the shadows and overlooked than it already is. In order to survive, queer culture needs to be resilient and for that to happen, it needs to be in touch with its heritage. With every piece of heritage that is successfully re-gayed/queered and conserved, the world becomes a little more diverse, a little more LGBTQIA+ friendly, and a lot more beautiful.

Queer cultural heritage: What and where is it?

Queer theory emerged during the 1990s as a method of questioning a heteronormative society acting within a gender binary, influenced by ideas of sexuality and identity (Watson 2005, pp. 69–70). It was developed concurrently with the movement towards normalisation and legitimisation of being queer (Seidman 2004, p. 260). Through the study of the (de)construction of queer identities, sexuality came to be considered as a 'set of meanings attached to bodies and desires' (Watson 2005, p. 74). Ultimately, what this 'set' entails is unique to each sexuality; the 'set of meanings' is different for an asexual man than for a lesbian. This 'set of meanings' can also be extrapolated and applied to gender, both within and outside the binary spectrum. Within all the different 'sets of meaning', the term 'queer' is an umbrella term for all these sets of meanings. It should be noted that these sets are flexible, forever changing and pushing boundaries (Watson 2005, p. 74). What it means to be queer then, is to have a set of meanings attached to oneself, born out of historical and cultural discourse to help understand one's individual identity in relation to oneself, and to society, pushing and questioning what is posited as normal. The problem with positioning the heteronormative, binary gender spectrum as normal, is that being queer is automatically pushed into the abnormal.

Queer theory helps create an understanding of what it means to be queer. It can also help create a framework for what it means for cultural heritage to be queer. No single aspect makes a piece of art queer. It is an intersection of who it was created by,

where it is located, and how it has been received. Queer theorist and Professor of English, Jennifer Doyle, discusses what it takes for art to be queer — artist, location, or a combination of the two. In her discussion of Andy Warhol as one of the most famously openly gay artists, the importance of location becomes evident. It could be argued that due to his sexuality, all art made by Warhol is inherently queer. However, when displayed in the Museum of Contemporary Art (MOCA), Doyle found Warhol's art to be 'de-gayed': the museum's narrative had completely taken Warhol's sexuality out of the discourse (2006, pp. 398–399). The de-gaying of Warhol's art makes clear that what makes art queer is not solely the fact that the work was created by an LGBTQIA+ artist. Location and the space's narrative are significant factors in what makes art queer. When displayed in a gay bar, Warhol's *Sex Parts* became instantly queer (Doyle 2006, p. 391). Located in its community, queer art remains queer, in turn confirming and enhancing the queerness of its location.

Doyle's experience with the de-gaying of Warhol in MOCA is not entirely representative of what can happen when queer art is in the GLAM (galleries, libraries, archives, museums) sector. The Unstraight Museum, and Australian Queer Archives Inc. (AQuA) are noteworthy examples of conserving queer cultural heritage within the GLAM sector. They collect and safely store queer artworks; AQuA does this physically and The Unstraight Museum digitally. Anyone can upload their artwork to The Unstraight Museum's website (The Unstraight Museum n.d.) where the artist retains the power to label their own work. Similar to Warhol's art being displayed in a gay bar, The Unstraight Museum and AQuA both highlight the intersection of location and artist. Albeit a digital space, The Unstraight Museum is an inherently queer space due to its purpose and aim, allowing queer artists into the collection, which then once more enhances the queerness of the space. AQuA does a similar thing, except physically and with stricter rules for material to enter the collection (AQuA n.d.).

Additionally, in recent years, there has been a growing awareness of the effects of the de-gaying of cultural heritage. In response, multiple museums in response have made efforts to reverse the de-gaying by re-gaying and queering their collections, exhibitions, and programmes. The Van Abbemuseum queer inventory, volunteer workgroups like London's V&A Museum's LGBTQ Working Group, and exhibitions such as *Queer* at National Gallery Victoria are noteworthy examples (Rensma, Neugebauer & Lundin 2020; Clayton & Hoskin 2020; NGV 2022). Within these initiatives, museum staff explore their collections and label the works they deem queer, as queer. This happens to works both made by famously queer artists and artists whose sexuality and gender remain unknown (NGV 2022). Conservators can help in this queering and re-gaying and so it is important to know what this entails.

In his lecture on queering classical art, art historian and queer theorist Dr Whitney Davis defined queering as 'to look for — and notionally to find — ... dimensions of nonstandard gendered sexuality, and in modern Western societies specifically its "nonheteronormative" dimensions' (2016, 11:37–11:49). To queer cultural heritage then is to impose a queer narrative upon something, or someone, which was not intentionally or outwardly queer when created or alive but has since gained value to the queer community through its potential queerness. For cultural heritage to be re-gayed, it first needs to have been de-gayed which implies that the work was initially created with the intention of being queer and/or had been successfully queered in the past. The re-gaying process then begins with the acknowledgement of the queerness of the heritage. Then, a queer narrative can be re-assigned to it.

Roles of the conservator

One thing conservators can do is join groups such as the LGBTQ Working Group at the V&A museum. Groups like these seek out queer cultural heritage in their museum collections and conservators can make meaningful contributions to these teams. They can do this in similar ways other group members do; by going through the collection in search of something queer (Clayton & Hoskin 2020, p. 57). Conservators can also provide insights into how the newly re-gayed heritage can be conserved. Similarly, conservators can provide consultations for organisations like AQuA to aid in the conservation of their collection.

When digitising cultural heritage, conservators can contribute simply by labelling objects as queer. Through this labelling, the queerness of the heritage becomes explicitly visible. Digitisation also makes the heritage more easily accessible, and keeping it in circulation will help prevent it from once again entering oblivion (Brunow 2019, p. 99). Once digitised, the objects can be added to digital archives dedicated to queer collections, such as the V&A blog *Out in the Museum*[1] or their LGBT+ hub[2] page (Clayton & Hoskin 2020, p. 58).

Another way conservators can contribute is during certain aspects of treatment. When conservators undertake treatment on objects, they develop intimate relationships with the object under conservation. This aspect of the job allows conservators to discover aspects that were previously unknown. Discovering new elements of an object shines new light on possible interpretations, including queer ones. These new interpretations can, and should, be discussed and appropriately documented.

Conservators can also ask critical questions about the museum space, what it represents, and its role within society. This will assist in pushing the boundaries of what is considered normal and will challenge the museum to reflect upon actions and ethics (Clayton & Hoskin 2020, p. 65). Asking these questions and starting these conversations might not be easy. However, they could prompt colleagues, such as curators and other decision makers, to begin to think about this as well. They can then in turn expand exhibitions and programmes to recognise and include more queer heritage.

In private practices, conservators can discuss the piece under conservation with their client and report new findings to their client. They can put their findings in a report so that there is a record. However, ultimately, the responsibility to pass on the queer knowledge to others falls upon the client. Another thing conservators in private practice can do is to advertise that queer works are welcome in their studios. They could do this by stating it on their website, have a small rainbow sticker on their studio's window, or find another way to get the word out.

These are just a few examples of how conservators can contribute to the queering/re-gaying of cultural heritage. It is up to the individual conservator to ask critical questions and examine what actions are appropriate to take. How exactly this plays out will vary from conservator to conservator.

It should also be noted that re-gaying and queering are exercises in power. Labelling something as queer versus not queer takes away its potential to be neither or perhaps, both. Such a label could prevent an object from entering other discourses or exhibitions if it is decided that a queer object is unwanted (Steorn 2012, p. 359). Conservators should thus be careful when queering or re-gaying cultural heritage and consider the potential negative consequences of it as well. The double-edged sword of labelling queer art as queer is representative of what it means to be queer, both for cultural heritage and for people. By being queer, the world becomes more a diverse place, but it also affirms the cis-heteronormativity of society and thereby the marginalisation of queer people and narratives.

This leads to a discussion of who should be at the forefront of the conservation of queer cultural heritage. When discussing authentic representation, American political scientist Dr Jane Jebb Mansbridge argues that marginalised groups should be the ones to represent their respective marginalised communities. At the core of her argument is the sentiment that authentic representation makes people feel seen and heard, and more at ease with policy decisions (1999, p. 651). This argument can be easily extracted and extrapolated to the discussion of who should get a front role in re-gaying cultural heritage. Queer conservators, if willing, should be given priority to aid the rediscovery of, and work with, queer cultural heritage. That is not to say that non-queer conservators should not be active, or not be allowed to be active, in re-gaying cultural heritage and its conservation. Without allies, the queer community would be nowhere, and as long as they are open to having dialogue with and learning from the community, they too are encouraged to take up the re-gaying responsibilities.

1 https://www.vam.ac.uk/blog/museum-life/out-in-the-museum

2 https://www.vam.ac.uk/info/lgbtq

Conclusion

Cultural heritage plays an essential role in creating and strengthening identity. It also offers comfort in times of need and makes a culture more resilient. Queer cultural heritage is present in diverse ways but not always recognised as queer. This makes the re-gaying and queering of queer cultural heritage a complicated process, but one where conservators can aid. As conservators develop an intimate relationship with an object during conservation treatment, they carry a responsibility to ensure the object is capable of living up to its fullest potential as queer, whether that is through digitisation, labelling, or documentation of new potential interpretations. They should also ask critical questions of their workplace, and document and label artworks appropriately. This is a collaboration between conservators, curators, institutions, and members of the LGBTQIA+ community. It is of course possible, and encouraged, for the conservators or curators to be queer themselves, or at least to be active allies. However, as the queer community spans a broad variety of sexualities and gender identities, having queer conservators work on queer objects does not exclude a consultation with the appropriate stakeholders within the queer community. Ultimately, the re-gaying of queer cultural heritage by conservators ensures that the LGBTQIA+ community, and its many cultures and identities, will remain visible and march towards a future of increasing acceptance.

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Demystifying textile conservation:
Accessible and effective methods for conservators

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The following technical note is aimed at the conservation of textiles — whether they are in a good state of conservation or with advanced degradation — but with the focus on proposing ethical, adequate, and low-cost solutions for conservators who work in institutions without much funding. These institutions will be considered in the following article. A considerable number of museums, mainly historical museums, and small house museums and collections, have examples of clothing and tapestries, among other textile materials in their collections. In some Latin American countries, such as Brazil, the person responsible for the conservation of collections does not necessarily know how to specifically treat and care for these materials. This lack of knowledge is caused by two main reasons: first, due to a certain lack of tradition in the treatment of textiles, since the most common teaching topics at universities are paper, painting, and sculpture. The second reason is related to the prevailing attitudes about textiles in museums.

The Brazilian researcher and conservator, Teresa Cristina Toledo de Paula (2011, p. 55), says that studies in textiles were historically, usually undertaken outside the academic field, as they are considered materials not worthy of 'literate men'.[1] Therefore, caring for textiles becomes a job usually performed by women, and precisely because it is historically 'women's work' or 'lesser, less erudite work', it ends up being diminished and excluded (Paula 2011, p. 55).[2]

This article seeks to present simple and economical options for the conservation of textiles in custodial institutions, aiming to promote the inclusion of these materials in research circuits, which would support their longevity, and to remove not only physical dirt, but also the negative and backward view of these objects, and promote their value within collections.

1 'homem de letras' (Paula 2011, p. 55).

2 'No Brasil a tecelagem foi, historicamente, uma atividade de escravos e posteriormente dos homens libertos e mulheres pobres, ou seja: uma atividade comum, de gente comum e mesmo considerada como 'inferior'' (Paula 2011, p. 55).

General characteristics of textiles

The production of textiles starts with the interlacing of two sets of yarn, called weft and warp (Figure 1). The warp is a stronger, tensioned yarn, as it needs to be interlaced in parallel. The weft passes over and under the warp threads, making an interlacing piece of fabric (Figure 2).

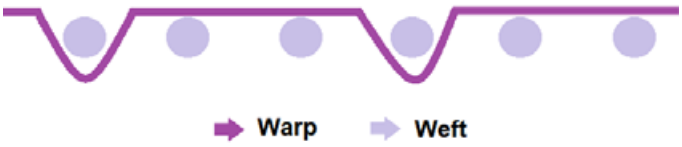

Figure 1: Weft and warp cutting section. Diagram by the author.

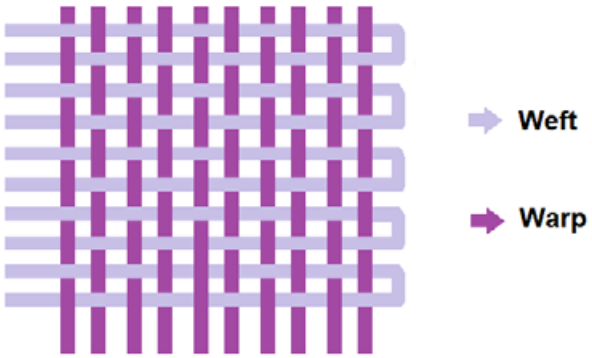

Figure 2: Weft and warp scheme forming a fabric. Diagram by the author.

It is important to note that the interlacing can be done in different ways, producing different weft structures, such as plain weave, twill, and satin, known as the three basic types of textile weaves.

Textile production material is classified into three types: animal, vegetable, and synthetic. Examples of animal materials include silks and wool; for vegetable materials, cotton, and linen; and for synthetic materials, nylon, and polyester. These different material types and how they are interlaced affect the characteristics of textiles. A silk satin, for example, needs to have a satin weft structure and be produced with silk, but there are also satins made of cotton and other different materials. A silk satin will be much shinier than a satin of any other material.

Damage causes

Among the main causes of damage in textiles is inappropriate relative humidity (RH) and temperature (T), improper storage and display, excessive exposure to light and ultraviolet (UV) radiation, and attacks by pests and rodents (Dancause, Wagner & Vuori 2018).

The common types of damage can include fading, losses, shrinkage, moisture stains, distortions, holes, grazing, insect attack, mould, particulates, solid contaminants, accumulated dirt, and others. Most damage can be avoided with good cleaning, adequate storage, and effective environmental control of T and RH (Dancause, Wagner & Vuori, 2018). Damage mitigation actions, the conservation care of textile collections, and how these causes are addressed, are the focus of the rest of this article.

Preservation and conservation methods

Textiles are extremely sensitive materials. While damaged textiles can be restored, restoration processes are often difficult to reverse. Therefore, a good preventive conservation approach is essential.

- *Relative humidity and temperature*

The literature in the preservation field, for example the Canadian Conservation Institute's preventive conservation guidelines online resource 'Caring for textiles and costumes' by Renée Dancause, Janet Wagner and Jan Vuori (2018), explains that RH above 70% can facilitate mould growth. Furthermore, in tropical countries, the external RH can reach 90% very quickly and is extremely difficult to stabilise internally to 50%. This is the recommended level within international literature, such as in *The Care and Preservation of Textiles* (1985) by Karen Finch and Greta Putnam, and in Sheila Landi's *Textile Conservator's Manual* (1985). But these texts are centred around European countries. Therefore, it is advisable to follow more adequate parameters for

tropical countries, such as those proposed by the climatologist, Antônio Oliveira (2016), in his climate analysis for the preservation of cultural heritage where the average temperature is 24 °C (75.2 °F) (with maximum possible variation of 4 degrees) and where average humidity stays between 40% up to 60% (with a maximum variation of 5%). In short, for those who have textile collections in very humid and hot regions, it is possible to place controls that keep the collections at 28 °C (82.4 °F) and 60% RH. It is important to remember that in the case of organic materials, like most textiles, the main problem is the *variation* of T and RH, as textiles are hygroscopic (they absorb and release water in exchange with the environment) (de Sousa 2018). This hygroscopic capacity causes damages such as losses, shrinkage, moisture stains, distortions, holes, and mould. It is recommended that RH and T controls and data-logging are implemented where possible, and RH and T data is reviewed regularly.

- *Dry cleaning*

The most appropriate method for textiles is dry cleaning because it is the least damaging, the simplest to control, and the least expensive. A common and efficient dry cleaning method is performed with a low power vacuum cleaner, fitted with a HEPA filter and a nozzle protected with a tulle fabric, as seen in Figure 3.

The fabric to be cleaned must also be protected with tulle, and a distance of at least three centimetres should be maintained between the nozzle of the vacuum cleaner and the textile (Figure 4). This cleaning should be performed on a table and with great patience, as it is time-consuming and detailed. If done properly, this cleaning removes the dirt between the weft and warp. Always carry out preservation procedures with personal protective equipment, especially cotton gloves and masks.

ATTENTION: Be careful with this type of dry cleaning, you may end up removing some threads. This should be noted particularly in the case of items such as tapestries or towels, where there may be extra threads between the warp and the weft (e.g. if the material has a terry finish). It is therefore important that this procedure is performed only by, or under supervision of, a conservator.

Figure 3: Nozzle protected with a tulle fabric. Image by the author.

Figure 4: Cleaning with tulle and a distance. Image by the author.

- *Storage*

Good storage can be accomplished in a few ways. In the case of clothes, the item can be stored inside flat supports or supported on hangers. The hangers should be stuffed with polyester fiberfill, for example, and covered with cotton knit or cotton sheeting. Otherwise, they should be packed in flat supports, and all folds and creases must be padded with cotton knit or cotton sheeting, which can be stuffed with polyester fiberfill, as seen in examples shown in Figure 5.

In the case of textiles such as tapestries, handkerchiefs and others that may not be able to be stored flat, the pieces can be wrapped in a cylindrical tube, and covered with a cotton sheet to prevent the accumulation of dirt.

Figure 5: (Left) Flat supports with all folds and creases padded with cotton knit stuffed with polyester fiberfill. (Right) Cotton knit stuffed with polyester fiberfill. Image by the author.

Conclusion

The main objective of this technical note was to demystify textile conservation in three aspects: first, in preventive practice in tropical countries, where some of the most widespread T and RH regulations are not completely adequate; then, still focusing on practical solution, in showing that it is possible to have good results with accessible materials and low cost possibilities; and finally in the theoretical field, where the conservation of fabrics has been gaining its space, but historically has not been recognised within conservation literature as worthy of scholarly attention. It is hoped that these goals have been achieved, so that more textiles last into the next generations, to be studied and increasingly recognised for their diverse research possibilities.

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Conserving Rothko's murals and aesthetic experience

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[Editors' note]
This article is adapted from a paper submitted as part of the author's diploma; it is published here with permission from the University of Cambridge.

When reading accounts of the most recent conservation treatments carried out on Mark Rothko's murals, one is struck by the presence of certain words and phrases: 'experience'; 'the viewer's experience'; and 'aesthetic experience'. Why do these concepts emerge so often in the context of Rothko's murals? And how do they impact conservators' decision-making? To explore and make sense of these questions, this essay brings together the aforementioned treatments, and outlines the commonalities between them. Having done so, it then examines various definitions for 'aesthetic experience', with a particular focus on those that seem most relevant to conserving the works of painters like Rothko. Finally, it considers what techniques and tools conservators can employ to systematically incorporate this vague and somewhat intangible concept in their work.

Conserving Rothko's murals

In the last twelve years of his life, Rothko undertook three major commissions for which he executed sets of large canvas paintings for particular interiors. The first, in 1958, was for a restaurant in the Seagram Building, New York; after completing many canvases, Rothko withdrew from the commission, but, nearly a decade later, he agreed for nine of the canvases to be installed in a certain space in the Tate Gallery, London (Cranmer 1987, p. 284) (Figure 1). The artist painted the second commission — the Harvard Murals — for Harvard University's new Holyoke Centre; these were installed in 1963 (Figure 2). Thirdly, John and Dominique de Menil commissioned Rothko to paint another series for their chapel in 1964; the chapel opened in 1971 (Figure 3).

Rothko's murals have long presented conservators with considerable challenges, and their treatments are thought to be some of the best-documented among monochrome paintings (Chiantore & Rava 2012, p. 220).[1] The most recently published accounts of conservation treatments carried out on each of the three series of murals have employed diverse

1 It is important to note that the murals have been vulnerable to change since shortly after their execution; for example, already in 1969, Sir Norman Reid, then Tate director, rejected two paintings of the set Rothko offered to the Tate because he thought the restoration work they required was too formidable (Breslin 1993, p. 518).

solutions to remedy very different challenges. Mancusi-Ungaro (1990, p. 136) dissolved a white exudate on the Chapel Murals with a cyclohexane–Freon 113 mixture. She devised a way for a pair to work in tandem so that the exudate could be dissolved and residues wiped away immediately to prevent streaking and variable cleaning across the large surfaces. Following extensive testing on a reconstructed sample representing the original painting, Barker and Ormsby (2015) were able to remove a vandal's ink from a Tate Mural with ethyl lactate and benzyl alcohol. Since it was impossible to remove all residues, the area was then retouched. Using calculations from digitally restored photographs of the murals' original appearance, Stenger et al. (2016, p. 348) designed a compensating illumination image that, when projected onto the Harvard Murals, restores the faded areas to the appearance of their original colour.

Despite the diversity of the latest treatments carried out, it is clear from the publications that a common and interconnected set of themes and factors was carefully considered before each of these treatments was decided. Some of the factors were those that are usually discussed as part of any painting's conservation treatment. For example, the degree of reversibility of treatments was considered. Since removal was irreversible, Barker et al. (2018) considered the validity of removing the vandal's ink from the Tate Mural beforehand. Similarly, Stenger et al. (2016, p. 359) chose to compensate for colour change with illumination rather than retouching, since, 'it is completely reversible and does not include any physical change'. Additionally, preventive measures to minimise further change are discussed in all the publications discussing treatments of Rothko murals. Mancusi-Ungaro (2003, p. 89), for example, reports that a new HVAC (heating, ventilating, and air-conditioning) system was installed because the high, and fluctuating, humidity within the chapel accelerated surface whitening. Similarly, although the large windows in the Holyoke room were a key feature of the original hanging setting, Stenger et al. (2016, p. 348) did not replicate them in the murals' new display since sunlight could accelerate further fading.

Other factors considered were more unique to the particular issues arising in conserving Rothko's murals. Firstly, there was great attention paid to the overall unity of the murals in each mural series; Rothko did not describe any individual canvas as an artwork, but rather described his sets of murals as 'an image' (Ashton 1983, p. 158), which, in turn, has made their restoration both more imperative and more difficult. For example, after the vandalism, Barker and Ormsby (2015) reported that 'although only one of them was targeted, their interrelatedness meant that the vandalism was particularly devastating'. Similarly, Mancusi-Ungaro's team agonised over the choice of approach to treat one of the Chapel Murals, reporting their final decision as the best of only bad outcomes — they had to infuse the entire painting with consolidant to preserve the paint, but regretted that they had to alter the nature, and potential future changes, of this canvas compared to the others in the chapel (Mancusi-Ungaro 2003, p. 92).

Secondly, the relationship between the murals and their display environment required explicit attention. Rothko felt the impact of his paintings depended on the interaction between them and the surrounding space (Borchardt-Hume 2008, p. 16), and it is well-documented how much emphasis he placed on the correct lighting, wall colour, and hanging position (Stenger et al. 2016, pp. 348, 357–358). Significantly, only the Chapel Murals remain in their original setting. Rothko worked with the Tate Gallery to devise a space for the Seagram Murals within the Tate Britain building (Ashton 1983, p. 156), but they hung in the Tate Modern for many years (Stenger et al. 2016, p. 349). The Harvard Murals have been rehomed in the Harvard Art Museums because the Holyoke room is subdivided into offices (Stenger et al. 2016, p. 349). Devising new display spaces has not been a simple case of either making them as close as possible to the original, or as close as possible to the artist's wishes. There were many aspects of the original spaces that Rothko disliked; he was disappointed by the final results of the room at Harvard (Breslin 1993, p. 454). While specific in some of his wishes for the spaces, he could also be ambiguous about others (Edwards 1971).

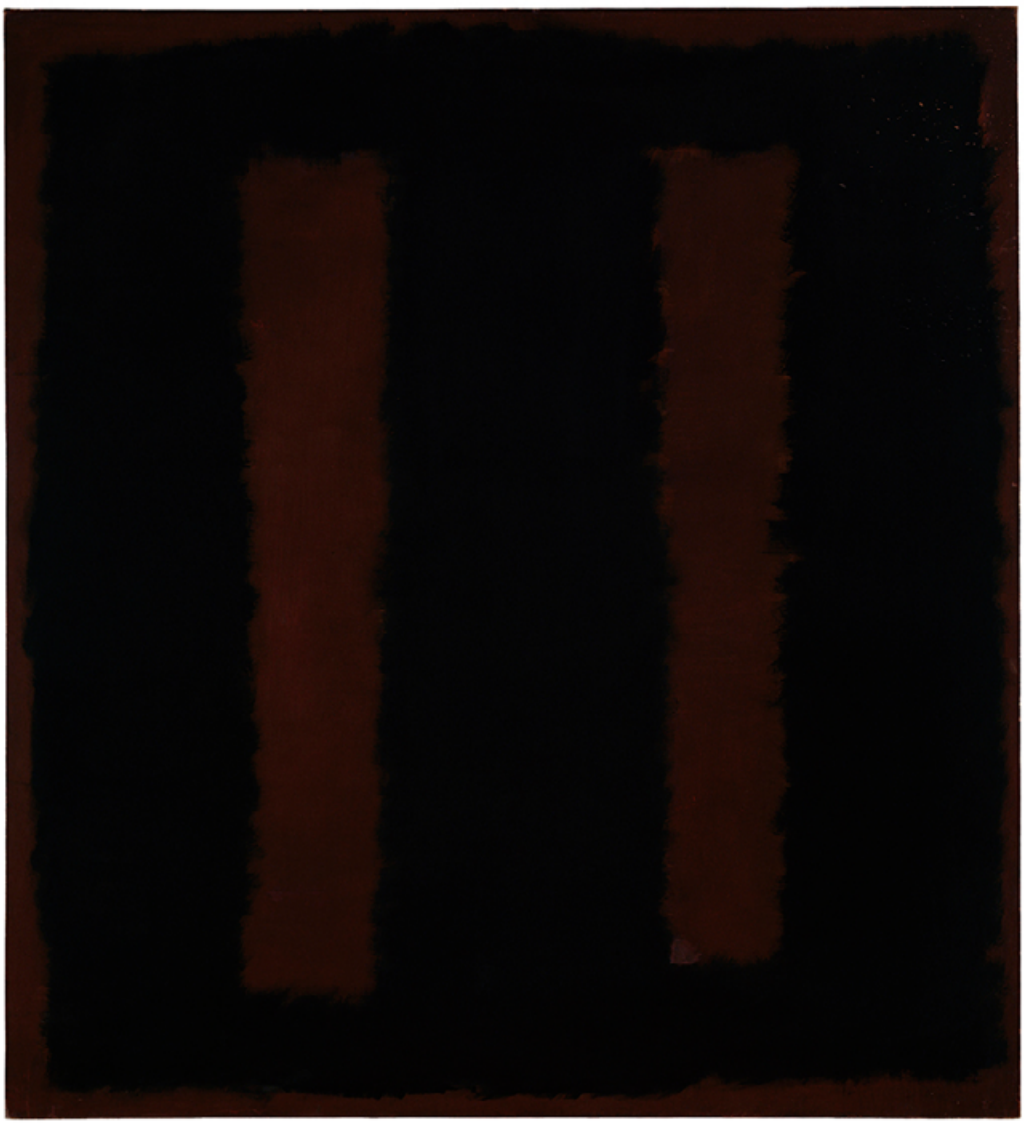

Figure 1:
Mark Rothko, *Black on Maroon*, 1958 (one of the Seagram Murals).
Oil paint, glue tempera and acrylic paint on canvas, 228.6 x 207.0 cm.
Tate Collection (T11070).

Photo: Tate.

Finally, as noted in the introduction, the published treatments all mention the importance of the viewer's 'aesthetic experience'. For instance, with regards to the Chapel Murals, Mancusi-Ungaro (1990, p. 136) notes that a successful treatment could not have been achieved without an understanding and appreciation of the artist's desired aesthetic effect on the viewer. Similarly, Stenger et al. (2016, p. 359) state that the success of their treatment of Rothko's Harvard Murals 'can only be assessed by experiencing the work' — it seems reasonable to infer that the type of 'experience' they refer to is aesthetic experience, since, earlier in the same paper (p. 350), they mention that the importance, and difficulty, of cleaning and restoring paintings is due to the fact that they 'dictate the aesthetic experience of the viewer'. Barker et al. (2018) explain the significance of vandalism to the Tate's murals in terms of its effect upon the viewer's 'experience', noting that it was unacceptable to leave the vandalism in place because it was 'interrupting the viewer's ability to experience the nuanced visual relationships between all nine of the Seagram Murals'.

A focus on aesthetic experience in the conservation of Rothko's murals seems fitting given how heavily it features in Rothko's commentary about his work. Rothko declared the viewer's experience a central preoccupation of his work — the only mechanism by which his paintings could be understood. This is set out in a letter that he wrote with Adolph Gottlieb and Barnett Newman to Edward Alden Jewell in 1943, which states, 'No possible set of notes can explain our paintings. Their explanation must come out of a consummated experience between picture and onlooker' (M Rothko in Wick 2001, p. 23). Indeed, in a 1947 issue of *The Tiger's Eye*, Rothko implies that the nature of a viewer's experience is a matter of life or death for his artworks: 'a picture lives by companionship, expanding and quickening in the eyes of the sensitive observer. It dies by the same token' (M Rothko in Ashton 1983, p. 104). Indeed, Rothko's concern that his paintings be experienced and not simply viewed has been put forward as an explanation for his decision to withdraw from the Seagram commission (Wick 2001, p. 29), and for his desire to control the environments where his murals hung (Ashton 1983, p. 130).

A worry that overemphasis on the material aspects of his work would be at the expense of its meaning may also be a reason that Rothko downplayed the importance of materials and technique. Barker and Ormsby (2015) touch upon this point when they state that:

> Although clear evidence of the artist's hand in the making of a painting was essential to Rothko, he sought to enigmatise his processes. Most likely, he wished for the viewer to be unencumbered with contemplating all too obvious remnants of his technique, but rather to be transported beyond their physical making.

Christopher Rothko (2004, p. xiii) seems to support this notion:

> [Mark Rothko] was guarded in discussing his work, often finding that, the more he said, the more misunderstanding he generated. He did not wish to short-circuit the process by which people came to know the work, and I think he understood how difficult that process could be.

Thus, Mark Rothko's reasons for telling the conservator Elizabeth Jones that he bought paint from Woolworths and did not know what kind it was (Cohn 2001, p. 59) may have been an attempt to deflect questions about his technique to refocus attention onto meaning. Nevertheless, his statement has been popularly taken as evidence that Rothko did not care about his materials or paintings' longevity (Breslin 1993, p. 455), which contrasts with statements by his assistant, such as: 'He was always reading these books on how to make paintings more permanent' (Edwards 1971).

Of course, there is no need for conservators to follow Rothko in holding meaning and materiality in opposition to one another. Put another way, to note the significance of aesthetic experience is not to diminish the importance of researching his materials and technique. Indeed, such an understanding is crucial to conservators when treating Rothko's work, as exemplified by mistakes made in the 1980s when little was known about Rothko's technique and whitening was misattributed to mould

(Mancusi-Ungaro 1990, p. 135).[2] All the same, the frequent invocation of aesthetic experience in the justifications and explanations for treatments of Rothko's work needs to be unpacked; given that the meaning of the aesthetic varies between schools of philosophy (Sparshott 1998; Berenson 1996; Dickie 1997; Kivy 1997), what exactly is being referred to when conservators use the term 'aesthetic experience'?[3] What is the relationship between the aesthetic experience of a painting and its materiality, and how should conservators navigate this relationship when faced with artworks like Rothko's murals? And, most practically, if conservators were to explain aesthetic experience to the levels that modern standards for treatment decision-making and documentation suggest — in such a way that it 'guarantees insight into the [treatment] justification so that it may later also be consulted by others' (Foundation for the Conservation of Modern Art 1999, p. 164) — how should they do so?

What is an aesthetic experience?

To the questions outlined above, the wider conservation literature provides no simple answer. It is generally noted that artworks have aesthetic aspects, and a generally accepted tenet of paintings conservation, made explicit by writers such as Cesare Brandi (2005, p. 48), is that conservation must preserve both the historic aspects and the aesthetic aspects of an artwork. But the concept of aesthetic experience is little mentioned, at least not explicitly.

Moreover, even in discussion of the aesthetic-historic binary, the definition of the aesthetic seems more relevant to paintings that represent something than to those that are abstract. In Brandi's writing (2005, p. 48), for example, the implicit assumption appears to be that if conservators preserve what a painting represents then its aesthetic aspects are correspondingly preserved; what it means to conserve the aesthetic aspect of a painting is often summarised along the lines of making the image 'legible' (Burnstock & van den Berg 2014, p. 14). This might be sufficient to serve the conservation of representational paintings (Berndes 1999, p. 164), but when it comes to works like Rothko's that do not depict anything, and so are not intended to be read as such, this conceptualisation of the aesthetic cannot be so easily applied.

The challenge of Rothko's art to this understanding of the aesthetic is highlighted by his own writing. His statement, 'explanation must come out of a consummated experience between picture and onlooker' (M Rothko in Wick 2001, p. 23), emphasises the relationship between artwork and observer, over what the painting depicts. Similarly, the writings of those whom Rothko felt were the most sympathetic to his work, such as Dominique de Menil and Katharine Kuh, pay special attention to the responses his paintings provoke — responses that involved feelings of timelessness, infinity, space and intimacy (de Menil in Mancusi-Ungaro 1998, p. 284; Kuh in Wick 2001, p. 25).

Nevertheless, in such writing, there is little description of how the material aspects of the artworks and their environments create these responses. Accordingly, one cannot easily draw from them how a conservation treatment may enhance or jeopardise such responses. No further explanation of this particular topic lies elsewhere in the wider art historical and critical commentary on Rothko. Historians generally confine their commentary to biographical, cultural and political contexts of Rothko's works (Gage 1998, p. 247). Weiss (1998, p. 303) sums up one potential reason for this focus: 'While Rothko's art invites extended contemplation, it has long proven difficult to describe'. Others, such as Christopher Rothko (2004, p. xiii), suggest that describing the responses to these works is not just difficult but also unnecessary — if what Mark Rothko wished to express was expressible in words, he would have written a book, rather than paint. Ultimately, 'if carefully regarded, his painting spoke for itself' (C Rothko 2004, p. xiii).

2 Accordingly, since then, Rothko's materials and techniques have been studied in-depth (see, for example: Mancusi-Ungaro 1981; Cranmer 1987; Mancusi-Ungaro 1990; Mancusi-Ungaro 1998; Carlyle et al. 2008; Standeven 2008; Kennedy & Stenger 2010; Barker & Ormsby 2015; Stenger et al. 2015).

3 Mention of aesthetic experience is also found in the conservation literature on artworks often grouped with Rothko's as 'American colour-field paintings'. For example, regarding Barnett Newman's works, Penn (2004, p. 142) states that 'the fact that his technique is readily discernible is an important component of the viewer's experience'. The meaning of the viewer's experience is never unpacked, but the artists' materials and methods are discussed in depth (see, for example: Berns, Krueger & Swicklik 2002, p. 52; Penn 2004; Gates et al. 2005; Haiml 2006, p. 150; Epley & Rogge 2015).

Figure 2:
Mark Rothko, *Panel One*, 1962 (Harvard Mural Triptych).
Egg tempera and distemper on canvas, 267.3 x 297.8 cm.
Harvard Art Museums/Fogg Museum (2011.638.1), Transfer from Harvard University, Gift of the Artist.

This broader inability to describe aesthetic experience, let alone that of a Rothko artwork, is well recognised, and has been named as 'mutism' by Peter de Bolla (2001, p. 4). de Bolla disagrees with those who posit that mutism is inevitable because attempts at verbalising aesthetic experiences destroy them, or because such experiences are not cognitive and so there is nothing to express, or because such experiences are personal and subjective and so cannot be shared, compared or discussed. Instead, he argues that the lack of definitional attempts is due to a lack of appropriate descriptive words, coupled with a lack of practice (2001, pp. 4–17). Since de Bolla sets out to put right this lack of practice, and even links his explanations to material aspects of artworks, his discussion of aesthetic experience seems particularly suitable for further exploration here.

de Bolla defines aesthetic experience as a virtual quality belonging to an artwork, but that is only visible to its viewer in the viewer's response to the work (2001, p. 135). This quality can therefore be located somewhere in the space between the artwork and the viewer's appreciation of it (2001, p. 135). In other words, 'although the tools we need to locate and understand that experience may appear to the viewer to reside in the object, this appearance is an illusion produced by our affective response' (2001, p. 18).

The most useful aspect of de Bolla's theories for a conservation context is his attention to both the aesthetic response and to the physical object that produced it. In this way, it seems more possible to link those aspects of an artwork that conservation is well-equipped to investigate — brushstrokes, pigments, and so on — with the intangible qualities of an aesthetic experience. In fact, de Bolla suggests that attending to the physical properties of an artwork helps to understand how a work interacts with one's affective response (2001, p. 27).

Specifically, it is worth summarising here three assertions that de Bolla makes about how the nature of aesthetic experience can be linked to properties of the physical object. Simply put, he argues that aesthetic experience involves a sense of space, a sense of time, and a sense of being. A sense of space is determined by the scale of the work, which is in turn determined by the physical attributes of the artwork like its size, the scale of the forms or colours on its surface, and the viewing distance (2001, p. 41). Next, the sense of time is affected by characteristics of the painted surface — colour and texture — which create sensations of temporalisation and sensitise the viewer to the time of looking (2001, p. 42). This, in turn, 'gives a quasi-narrative structure to the process of looking' (2001, p. 42). Finally, de Bolla describes how aesthetic experience gives rise to a sense of being: 'What it is like to be, or, perhaps more accurately, helps me feel being' (2001, p. 48). A sense of being, he suggests, is linked to what is depicted on the surface of a painting. In the case of abstract colour-field works, the human form is displaced from the picture plane into the space in front of the canvas, strengthening the feeling of 'knowing that one is there' (2001, p. 48).

Together, these three aspects of an aesthetic experience can begin to explain why and how the physical aspects of a painting interact with a viewer's experience of it. Nevertheless, de Bolla's theorisation does have shortcomings when considered in a broader conservation context. To begin with, it could be argued that his articulation of aesthetic experience matches up too well with the suggestions made by artists like Rothko and Barnett Newman about their work; perhaps de Bolla's definition of aesthetic experience has been overly influenced by his deep knowledge of Rothko's and Newman's writing. Buried in Rothko's comments on his work's meaning, one can also find mentions of 'space' (M Rothko 2004, p. 59), 'scale' (M Rothko 2004, p. 93), and 'timeless[ness]' (M Rothko in Ashton 1983, p. 79). More importantly, de Bolla provides little direction as to when it might be necessary to make an intervention for the sake of aesthetic experience. He only hints that changes to physical aspects of artworks, such as an altered hanging position that forces a different viewing distance, can affect aesthetic experience (2001, p. 50). Quite obviously, this is a question of critical importance for conservators, particularly when having to explain and justify their decision-making.

Aesthetic thresholds

To take stock: firstly, aesthetic experience is frequently invoked in the justifications and explanations for treatments of Rothko's work ('The success of the treatment can only be assessed by experiencing the work' (Stenger et al. 2016, p. 359)); secondly, there is no readymade, fit-for-purpose definition of aesthetic experience for paintings conservators to draw on; and thirdly, 'explicating and thereby controlling the considerations which in practice are often implicit' is a key part of good conservation practice (Berndes 1999, p. 166). What can paintings conservators do to resolve this complex situation?

Interestingly, the challenges that installation art conservators face — summarised, for example, by van de Vall (2015, pp. 299–300) — are not dissimilar to those encountered when conserving Rothko's murals. Unforeseen alterations of materials occur frequently in installation art in ways that are analogous to the unforeseen colour changes that have occurred in Rothko's works. Additionally, conservators of installation art often deal with changes in the environments of site-specific works, in a similar way to how conservators have had to consider the re-display of site-specific murals by Rothko, now that the original sites are unusable. Just as Rothko's comments are often contradictory or ambiguous, artists' wishes for their installation works are not always decisive, and their tolerance for variation is not always clear. Importantly, the viewer's aesthetic experience — and the importance of and challenge to — conservation in maintaining it, is mentioned frequently in the context of conserving installation art (see, for example, Doherty and Shockey 2016, p. 82).

Due to these parallels, approaches developed in installation art may offer useful ways to consider Rothko's murals, and the conservation of aesthetic experience. Since the materials, appearance and environment of a site-specific work often change (Wharton & Molotch 2009, p. 214), conservation's role for installation art is acknowledged as that of managing difference between incarnations or iterations of the work (Fiske 2009, p. 234). This is done by determining the acceptable boundaries of difference and maintaining the work within them (Wharton & Molotch 2009, p. 212). This could also be said of the roles of the Rothko mural conservators. Viewing the conservator's role from this angle, it is easier to see that questions about what aesthetic experience means are more usefully reframed as: what are the acceptable limits of change in Rothko's murals, beyond which aesthetic experience is unacceptably changed?

Installation art conservation has developed the idea of 'tipping points' or 'aesthetic thresholds' to help determine the acceptable boundaries for change that do not lead to aesthetic compromise (Doherty & Shockey 2016, pp. 81–94). The idea is particularly relevant for instances where the artist's vision is vague or ambiguous. For example, for an artwork involving bulbs that faded over time, its conservators determined the threshold at which the dimness of the lights aesthetically compromised the work — once there was consensus that the aesthetic threshold had been reached, the piece was de-installed and restored (Doherty & Shockey 2016, pp. 81, 89). Thus, once an artwork has passed beyond its aesthetic threshold, it may be considered as no longer the artwork, but a 'reminder of what the artwork was' (Muñoz Viñas 2010, p. 16).[4] In the case of Rothko's murals, we could reasonably assume that when these cross an aesthetic threshold, they have passed from a state where the viewer's aesthetic experience is enabled, to a state where it is disabled. Or, as Rothko might have put it, from 'alive' to 'dead'.

Gathering together evidence of the points at which Rothko's murals have been perceived to cross aesthetic thresholds may begin to build a picture of what it is that constitutes an aesthetic experience of them.[5] It may help clarify what aspects of their physical make-up are most crucial to the viewer's aesthetic experience, and so can tolerate the least change — the artwork's 'critical mass' (Gordon 2014, p. 97). This, in turn, could provide instruction, for example, for how a treatment could be evaluated through 'experience', as Stenger et al. (2016) propose.

4 Maintaining the artwork as a reminder of itself is not always unacceptable, for example where restoration would destroy the artwork (Muñoz Viñas 2010, p. 17).

5 Rothko himself is reported to have commented on 'how the work sprang into life at the last moment; how an eighth of an inch at the edge of a vast canvas made a critical difference' (Novak & O'Doherty 1998, p. 268); this suggests that critical observation of aesthetic thresholds was in fact also part of the creative process.

Figure 3:
View of the triptych in the Rothko Chapel.
Image © Rothko Chapel, Houston, TX.
Photograph by Paul Hester.

It is already possible to point to instances recorded in the literature where certain viewers have considered aesthetic changes to the murals, and have judged whether these were acceptable. For example, Barker et al. (2018) felt that the various ways the murals have been reconfigured for display at Tate has never posed any aesthetic problems since 'the effect is always the same, one of miraculous pictorial and experiential harmony'. However, they deemed the vandalism in 2018 unacceptable, since they found that it interrupted the viewer's experience. From this, we can conclude that, for the Tate's murals at least, any visible additions to the surfaces of the murals crosses an aesthetic threshold, but that changing the murals' positions relative to one another does not. Therefore, perhaps the surfaces of the murals constitute more of the artwork's critical mass than their display configuration.

However, there are also contradictory opinions in the literature regarding whether certain aesthetic changes to murals have been acceptable. For example, in 1988 after a long period in dark storage, Rothko's estate considered the Harvard Murals to be re-exhibitable in their faded state, as long as they were not separated from one another (Stoner 2009, p. 18). The murals' conservator agreed. She was 'astonished' that once they were hung in the exhibition space, which was in fact 'closer to the space the artist had imagined for his painted environment' than the Holyoke room itself, the 'depressing, deteriorated aspect of the panels… vanished … Once again they were mesmerising in their silent, sombre presence' (Cohn 2001, pp. 55–56). However, the art press covering the exhibition disagreed, lamenting that the murals were irretrievably 'lost' (Stenger et al. 2016, p. 350). Thus, to some, the colour change crossed an aesthetic threshold; to others, it did not. Accordingly, it is clear that many more evaluations of aesthetic changes would need to be gathered and evaluated before any clear conclusions emerge about what exactly constitutes an aesthetic threshold for Rothko's murals.

Conclusion

This essay has explored some of the commonalities between recent treatments of Rothko's murals. Some of these commonalities — reversibility and preventive measures — are typically considered in paintings conservation decision-making; others, such as the relationship of the set of paintings to one another and to their environment, were more particular to Rothko's mural series. Most notably, the notion of aesthetic experience was considered to be crucial in determining the success of treatments and in decision-making.

Why this is the case makes sense, particularly in the context of Rothko's comments about the meaning of his work. At the same time, however, clearly delineating aesthetic experience is not straightforward; there is no simple definition for aesthetic experience in the conservation literature, and, to some extent, the value of the concept to artists like Rothko appears to lie in the way that it points towards that which is undefinable in their work. Accordingly, to remedy this situation, this essay has put forward the concept of aesthetic thresholds, proposing that this concept, used in the field of installation art conservation, might assist paintings conservators in their decision-making.

More broadly, Rothko's murals highlight a central and unique challenge of the discipline. Conservators decide the future of the material aspects of an artwork, and are expected to be scientific, systematic and explicit about their decisions. At the same time, the material, tangible aspects of an artwork are inextricable from its more intangible meanings, and from the intangible experience one might have of it. Put another way, the inexpressible is contained within the expressible, but the expressible is all we have to work with.

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Profile picture of the author © Photographer: Mark Hamilton.

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Conservation in fiction:
A Month in the Country by J L Carr

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'Damp's the doom of wall paintings', explains narrator Tom Birkin in the opening pages of *A Month in the Country*. He is recollecting his first day on a new job: tramping in the rain around a village church in northern England as he surveys its rain-gutters and down-pipes. 'If there'd even been one green wall', he recounts, 'I might as well have turned around there and then and let myself be washed back to the station'. It is 1920, and the narrator, trained at London College of the Arts, but more recently returned from the trenches of the Western Front, has arrived at the fictional Yorkshire village of Oxgodby with a commission to uncover a medieval wall painting in the local church.

J L Carr's novel, published in 1980, takes the form of a memoir: a much older Birkin is reflecting back on the experience of his first paid wall-painting restoration. The job itself functions primarily as a narrative device to place a war-traumatised Londoner in a bucolic country setting, where the psychological scars inflicted by the battlefields of Flanders and his unstable marriage can start to heal. The actual work — the mechanics of removing a layer of limewash from a tempera painting — does not form a significant portion of the narrative, nor does it provide much conflict or tension to the plot. The narrative interest lies mainly in Birkin's evolving relationships with the villagers from two harmoniously co-existing religious denominations, with the archaeologist employed to look for an unmarked grave in the churchyard, and with the English countryside. The reader with an inclination towards art conservation will be disappointed if they anticipate a wealth of details on the process of uncovering a wall painting. What might interest them, however, is the ways in which the protagonist and his relationship to his profession are characterised over the course of the book.

From the very first pages, as he alights the train at the village station, Birkin signals his attentiveness to the particular. His overcoat — second hand, pre-war, and missing some buttons — he describes as 'about 1907' and of 'wonderful material, the real stuff, thick herringbone tweed'. Under the protection of this oversized garment he struggles up the lane in the rain towards the church. From a distance the building seems unassuming, but closer inspection allows him to note the quality of the masonry: 'fettled up very nicely — limestone ashlar not rubble'.

He immediately identifies the stone's quarry of origin (Tadcaster) from its tinge of pale yellow (magnesium). 'Don't let the detail irritate you', he begs his reader. The reader is not irritated. In fact the detail throughout the novel, while at times esoteric, is employed so as to subtly piece together a character whose appreciation (and nostalgia) for craftsmanship, expertise and materials is a defining trait.[1] The objects of his admiration are often shabby or everyday items of intrinsic quality: the recalcitrant stove in the church where he takes up residence; the oil-lamp in the stationmaster's home with its 'beautiful pink cut-glass paraffin reservoir'. These items do not so much stand in contrast to the medieval masterpiece he is uncovering in the church as somehow exist at different locations on a shared plane.

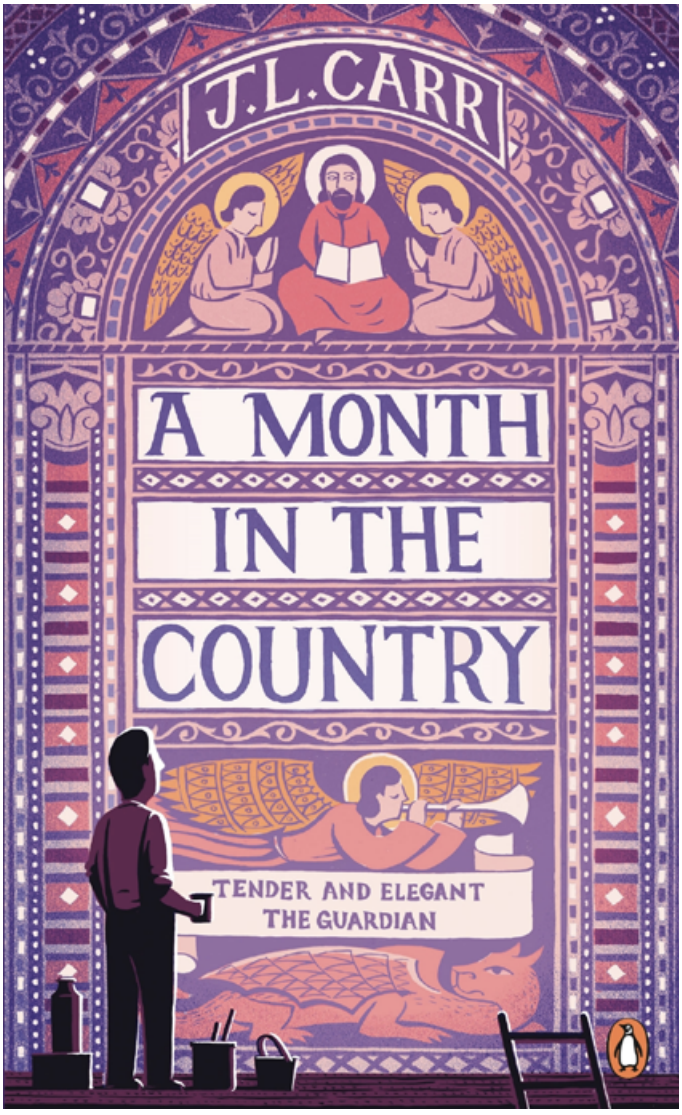

Figure 1: *A Month in the Country* by J L Carr, 2014 edition by Penguin Essentials. Cover art by Jon McNaught.

Likewise, Birkin's esteem for the painting's creator, whom he quickly identifies as a master of his trade, is paralleled by rather than contrasted to his surrounding cast of characters. Looking back at his time in Oxgodby, Birkin's memories of its residents feature their particular skills and powers of observation, from the vicar's wife Alice, whose orchardist father had taught her to discriminate between varieties of apples with her eyes closed, to the archaeologist Charles Moon, digging in the churchyard, who could interpret the contours of the land to guess at what lay beneath. It's important not to overstate this point: when Birkin remarks on the stationmaster's prowess with the carving knife at Sunday dinner, he is not equating this expertise to that of a master painter. But by drawing attention to such details, he implicitly draws a continuum between the quotidian, micro-expertise of the locals and the skills of the anonymous painter of the church mural. The odd mention of emblematic, non-fiction figures such as composers Elgar, Tallis, and Byrd serves to reinforce this sense of appreciation for human mastery.

Whether or not Birkin considers himself to be an expert remains ambiguous. In fact, neither the narrator himself, nor any other character throughout the novel, ever puts a label on his profession. He's never referred to as a conservator or restorer. 'He's come to put us in the picture about what's above the chancel arch', is how Moon introduces Birkin to an elderly villager; 'the chap [...] who's going to do a cleaning job in the church', explains the stationmaster to his daughter Kathy. Indeed, glorified cleaner is exactly how, at certain moments in the novel, Birkin describes himself. 'Look, how many times have I to tell you I'm not an artist', he says irritably to Kathy, 'I'm the labourer who cleans up after artists'. Later, when asked if his occupation ran in the family, Birkin, whose father was a travelling soap salesman, replies, 'How clever of you to guess. We were in the cleaning business'. Birkin's self-perception of being in service to someone (or something) superior to himself — and his impulse to portray his work in self-deprecating terms — is encapsulated in an exchange with Alice, who has come to the church to watch him work. When she asks him to explain what he's doing, Birkin, at that moment uncovering an area of painting depicting a cloaked figure, responds, 'I'm valeting a gent's overcoat'.

1 The fact that these objects, materials and experts are almost exclusively English is a topic for a different essay.

And yet, his attitude towards his own occupation is not unequivocally self-effacing. 'Perhaps I'm making it sound too easy', he muses at one point, explaining the process of gridding the wall with chalk, moving methodically from square to square, crouching, stretching and shuffling along his scaffolding. On the occasions where he does reference his own expertise, he points to the looking and thinking aspects of his work, rather than the doing. It is through looking and thinking that judgements are formed, and it is these judgements that constitute the foundation of his expertise. 'In our business', he writes, 'no-one has ever come up with an instrument that pings when you've cleaned off the grime of time's fell hand and just another touch will shift the hand itself [...] It really amounted to looking long and doing little'.

Indeed, glorified cleaner is exactly how, at certain moments in the novel, Birkin describes himself. 'Look, how many times have I to tell you, I'm not an artist', he says irritably to Kathy, 'I'm the labourer who cleans up after artists'.

Ultimately, the meaning that Birkin derives from his work is partially responsible for his gradual recovery. Restoring a piece of the distant past serves an antidote to the destruction and rupture of his recent history. On arrival in Oxgodby, Birkin is shell-shocked: he stammers and his face twitches uncontrollably. Painstakingly uncovering the painting allows him to position himself within a historical lineage that is of more solace to him than the Church of England rites he can hear from his belfry bedroom, or the services he dutifully attends to repay the hospitality of the local Wesleyans. His sense of being 'face to face with a nameless painter reaching from the dark' is for him a more effective therapy than organised religion. (The capacity for cultural practice to act as a connective tissue across time echoes throughout the novel — local dishes, cooked by generation after generation of Yorkshire women, are referred to by Moon as 'disposable archaeology'). Towards the end of the summer when Alice remarks that he seems happy, less on edge, Birkin attributes the transformation in part to the feeling of kinship with the painting's creator, of 'cosily knowing that I was a sort of impresario conjuring and teasing back his work after four hundred years of darkness'.

The capacity for cultural practice to act as a connective tissue across time echoes throughout the novel — local dishes, cooked by generation after generation of Yorkshire women, are referred to by Moon as 'disposable archaeology'.

The reader who is not interpreting *A Month in the Country* entirely through the prism of conservation will clearly see that Birkin's healing is also just as much, if not more, a product of time spent in the countryside, and of the bonds he forms with the people of the village. Birkin's attitude towards his chosen profession remains unstable throughout the novel. Sometimes his job seems to be for him merely a means of making a living, at others it's a 'cloak' to 'creep inside to hide'. He makes no grandiose claims about preserving culture for future generations. It is enough for him that he has spent time in the company of a great artist and that, one day, a stranger might stand in front of the painting and understand.

Exploring the use and potential of Nanorestore Gels® in the conservation cleaning of plastic objects

by Jessica Argall
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Jess is a Masters student at the Grimwade Centre for Cultural Materials Conservation. With a background in fine art, sculpture, and art history and theory, she is particularly interested in the conservation of modern and contemporary art and materials. Jess is also passionate about conservation's future and its relationship to sustainability, community and advocacy.

[Editors' note]
Jess discussed Nanorestore Gels® and NANORESTART in an assignment submitted to the University of Melbourne.
Her ideas were substantially re-worked for publication in *Scroll*.

Over the past year, I have developed an interest in strategies for the treatment of plastic objects. While I never thought that plastics would take my fancy, this curiosity has grown out of a particular interest in contemporary art and its incorporation of modern materials, which pose significant challenges to conservation. Following research to guide the cleaning of a particularly dirty plastic substrate during the first major treatment of my conservation studies, I hoped that the opportunity would arise in the future to apply methods that had been recently published by Shashoua et al. (2021). Building on research into the cleaning of plastics by the NANORESTART (2015–2018) and POPART (Balcar et al. 2012) projects, Shashoua et al. (2021) concluded that poly(vinyl alcohol)(PVA)-based hydrogels cause significantly less damage to plastic substrates than traditional cleaning tools such as cotton swabs and microfibre cloths. They were found to remove soil from plastics whilst minimising abrasion to surfaces (Shashoua et al. 2021) and providing controlled removal of grime (Baglioni, Chelazzi & Giorgi 2015, p. 10). At the beginning of a subsequent conservation treatment, when faced with the cleaning of a plastic anatomical model, my chance had arrived!

This paper will examine the use of Nanorestore Gels®, a series of PVA-based hydrogels based on nanotechnology, in the wet cleaning of a plastic anatomical model comprised of soiled, abraded poly(methyl methacrylate) (PMMA) and plasticised poly(vinyl chloride) (PVC). It will also provide an overview of the development of nanotechnologies for use in conservation cleaning and note some published examples of their use in conservation treatments.

The development of nanotechnologies for use in conservation cleaning

The first application of nanotechnology to conservation cleaning was seen in the late 1980s. Using nanostructured fluid systems based on surfactants, wax spots were removed from painted surfaces of Italian Renaissance wall paintings in Florence (Baglioni et al. 2013). Several nanostructured fluid cleaning systems have since been developed. The

use of nanoparticles in dispersions increases their effectiveness. As the size of particles is reduced, the surface area per unit volume increases, thus increasing the surface area available for reactions to take place and the material's reactivity (Baglioni, Chelazzi & Giorgi 2015, pp. 3–7). See Figure 1.

Edge length	4	2	1
Drying speed	96	192	384
Lining test	64	64	64
Surface-to-volume ratio	1.5	3	6

Figure 1: Diagram illustrating that as the size of particles is reduced, the surface area per unit volume increases. This is the mechanism through which the use of nanoparticles increases the efficacy of cleaning systems. Digram by Michele Baglioni. Source: Baglioni et al. 2015, p. 3.

Nanorestore Gels®

Nanorestore Gels® were developed by NANORESTART (Nanomaterials for the Restoration of Works of Art). This project aimed to use nanotechnology to produce and advance solutions for the protection of modern and contemporary art in response to the conservation challenges posed by its materials. In its development of cleaning solutions, the project focused on addressing environmental and human risks, controlled cleaning and material costs. The resulting hydrogels are highly retentive, reusable, controllable and can be used with 'green' surfactants and solvents (Baglioni, Chelazzi & Giorgi 2021). Nanorestore Gels® are physical hydrogels based on a PVA polymeric network. Nanorestore Gel® Peggy 5 is a blend of PVA and poly(vinylpyrrolidone) (PVP) polymers, while Nanorestore Gel® Peggy 6 is made solely from PVA. As a result, Nanorestore Gel® Peggy 6 is a more flexible, elastic gel. Nanorestore Gel® Peggy 5 is less flexible and elastic but highly retentive due to the addition of PVP (Bartoletti et al. 2020, p. 11; Bonelli et al. 2019). The gels may be ordered and used as thin sheets or a small cube referred to as a 'Gum' (CSGI 2015). As in sheet form, Nanorestore Gel® Peggy 6 Gum is more flexible while Nanorestore Gel® Peggy 5 Gum is firmer and has higher liquid retention. See Figure 2.

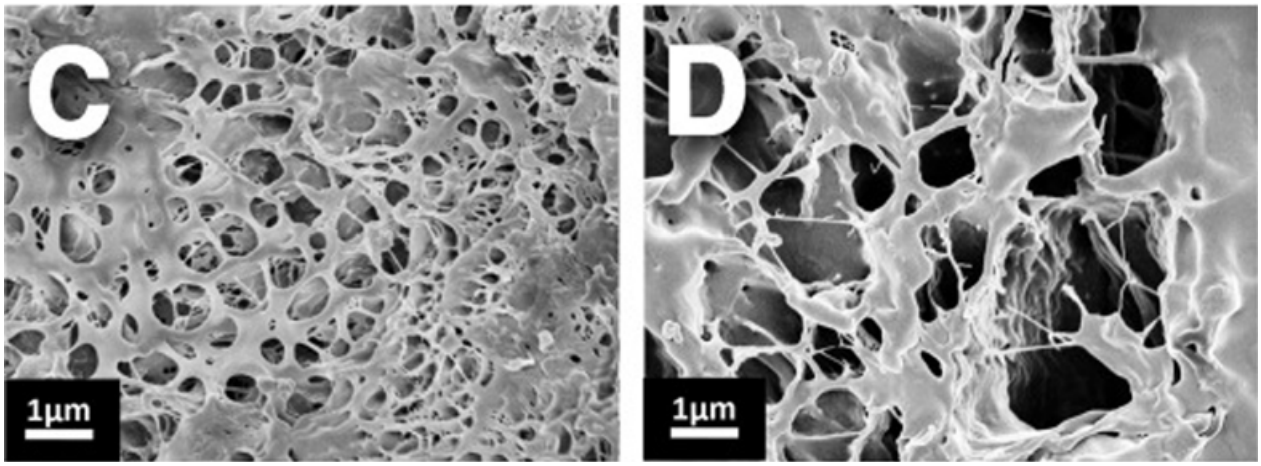

Figure 2: FEG-SEM images of hydrogel formulations illustrating the effect of a gel's structure on its mechanical properties. Image C shows a freeze-thawed PVA hydrogel, such as Nanorestore Gel® Peggy 6. Image D shows a freeze-thawed PVA/PVP hydrogel, such as Nanorestore Gel® Peggy 5. Source: Bonelli et al. 2010, p. 344.

Nanorestore Gels® combine the increased effectiveness of nanoparticles with the many advantages of gels in conservation cleaning. Used widely in conservation treatment, varied types of gels provide the user with greater control and safety when cleaning vulnerable surfaces. By holding a cleaning agent at the surface of the object and releasing it slowly into the substrate, gels minimise numerous risks, including: the uncontrolled spread of liquid across the surface of an object or into its pores; damage caused by mechanical action; and the health risks posed to conservators by some solvents. They provide increased contact time between the cleaning agent and the surface, which in turn, leads to more effective removal of soiling, staining and coatings. The varied viscosities of gels also allows them to be used on complex and vertical surfaces (Baglioni, Chelazzi & Giorgi 2015, pp. 7–12; Khandekar 2004).

Additionally, hydrogels eliminate the presence of residues left by some gels — the entire gel can be, simply, peeled from the treated surface (Baglioni, Chelazzi & Giorgi 2015, p. 12). When nanotechnology is applied to gels, the greater surface area provided by nanoparticles increases the capacity of the gel to both retain liquid and absorb dirt. When loaded with water or other solvents or solutions, Nanorestore Gels® can remove dirt from the substrate in two manners. Firstly, contact with the gel may lead to solubilisation. Subsequent yellowing or discolouration of the gel indicates migration of dissolved dirt into the gel network. Secondly, the gel may swell or detach hydrosoluble dirt and grime. In this case, following removal of the gel, swollen or softened dirt may be removed with light mechanical action (using, for example, a cotton swab or microfibre cloth) (Baglioni, Chelazzi & Giorgi 2015, p. 107).

NANORESTART case studies

As part of the NANORESTART project, a number of case studies were conducted across a range of artwork types to test the efficacy of the Nanorestore Gels®. An interesting example of their use can be seen in the conservation treatment of Eva Hesse's *Addendum* (1967, Tate Collection). [1] Amongst a selection of cleaning methods devised and tailored to the objects' varied materials, Nanorestore Gel® Peggy 6 was loaded with a tailored aqueous solution to safely and successfully remove embedded dirt from ropes (Bartoletti et al. 2020). Due to the consistency of the gel and the ropes' highly textured surfaces, custom supports and clamps were used to ensure effective contact with the surface. Additionally, during this treatment, a new series of gels were produced. By adjusting the synthesis procedure in their manufacture, modifications were made to Nanorestore Gels® to improve and adapt their physical properties to the needs of the object. Another case study in the NANORESTART project evaluated the effectiveness of a range of gels and microemulsions for the cleaning of soiled surfaces and removal of an adhesive label on *Op Structure*, a PMMA sculpture by Michael Dillon (1967, Tate Collection).[2] While Nanorestore Gel® Peggy 5 was not ultimately deemed the most effective method, Angelova et al. (2022) note its potential for further exploration. Compared to other cleaning techniques, it consistently ranked higher than others in its health and safety advantages and lack of residue left on the object. In addition to mixed media objects and complex surfaces, the NANORESTART case studies also examined the use of the gels on two-dimensional surfaces, such as the cleaning of Roy Lichtenstein's painting *Whaam!* (1963, Tate Collection).[3]

1 Eva Hesse, *Addendum*, 1967. Papier mâché, wood and cord. 124 x 3029 x 206 mm. Tate Collection (T02394). See the work here: https://www.tate.org.uk/art/artworks/hesse-addendum-t02394

2 Michael Dillon, *Op Structure*, 1967. Perspex. 910 × 360 × 136 mm. Tate Collection (T03717). See the work here: https://www.tate.org.uk/art/artworks/dillon-op-structure-t03717

3 Roy Lichtenstein, *Whaam!*, 1963. Acrylic paint and oil paint on canvas. Support: 1727 × 4064 mm, frame: 1747 × 4084 × 60 mm. Tate Collection (T00897). See the work here: https://www.tate.org.uk/art/artworks/lichtenstein-whaam-t00897

Treatment of a plastic anatomical model

The object of the treatment in which I employed the use of Nanorestore Gels® was an anatomical model of a finger. Its clear components represent bones while coloured cords represent dorsal hoods. The object is from the Harry Brookes Allen Museum of Anatomy and Pathology, at the University of Melbourne, and was possibly made in-house between 1955–70 by Noel Sherson, a general surgeon and lecturer in the Medical Faculty at the University of Melbourne (Long 2022, pers. comm., 6 July; Royal College of Surgeons of England 2022). The object is unique within the collection (Long 2022, pers. comm., 3 May). It represents a particular point of time in the manufacture of anatomical models, where the affordability, accessibility and optical qualities of plastics provided new methods of making and effects that could be achieved (Narang et al. 2021).

In visually examining the object, light discolouration and surface dirt was observed on the clear plastic, particularly where the surface was abraded due to the maker's manual shaping of the material. To stabilise the object and prevent future degradation due to the presence of dirt, cleaning was undertaken. Ensuring that proposed treatment options were appropriate and safe for the object, the materials were identified (Shashoua 2008, p. 113) using Fourier-transform infrared (FTIR) spectroscopy. This confirmed that the clear body of the object is polymethyl methacrylate (PMMA) and the coloured cords are plasticised PVC.

Methodology

PMMA components were cleaned with Nanorestore Gels® where dirt was visible or the surface appeared discoloured (see Figure 3). Nanorestore Gel® Peggy 5 and 6 were each cut into three pieces and loaded by immersion in a solution of 1% Orvus® WA Paste (sodium lauryl sulfate) w/v in deionised water for at least 12 hours (Baglioni, Chelazzi & Giorgi 2015, p. 107; Shashoua et al. 2021, p. 39). While varieties of Ecosurf™ are increasingly used in conservation in place of Orvus® WA Paste due to their biodegradability and lower aquatic toxicity (Angelova et al. 2022; Ormsby & Learner 2013; The Dow Chemical Company n.d.), the decision was made to use Orvus® WA Paste due to its prevalence in studies observing the microscopic effects of cleaning on plastics (Balcar et al. 2012; Shashoua et al. 2021). Using tweezers, gels were placed on the object for 10–30 minutes, then removed by simply lifting or peeling the gel off the surface (see Figure 4). After removal of the gel, the surface was cleared by very lightly dabbing with a microfibre cloth dampened with deionised water, so that detergent would not remain on the surface and cause chemical damage. Gels were cleaned by immersion in deionised water for at least 12 hours before being reused (Baglioni, Chelazzi & Giorgi 2015, p. 107). Each gel was reused three times, however the Nanorestore Gels® may be used five or more times and stored between uses immersed in deionised water. Their capacity for reuse depends on the nature and quantity of dirt absorbed from the substrate and any damage to the gel from the

Figure 3: The anatomical model of the finger showing the surface dirt (left to right) before application of gel, after one application of gel, and after two applications of gel. Images by the author.

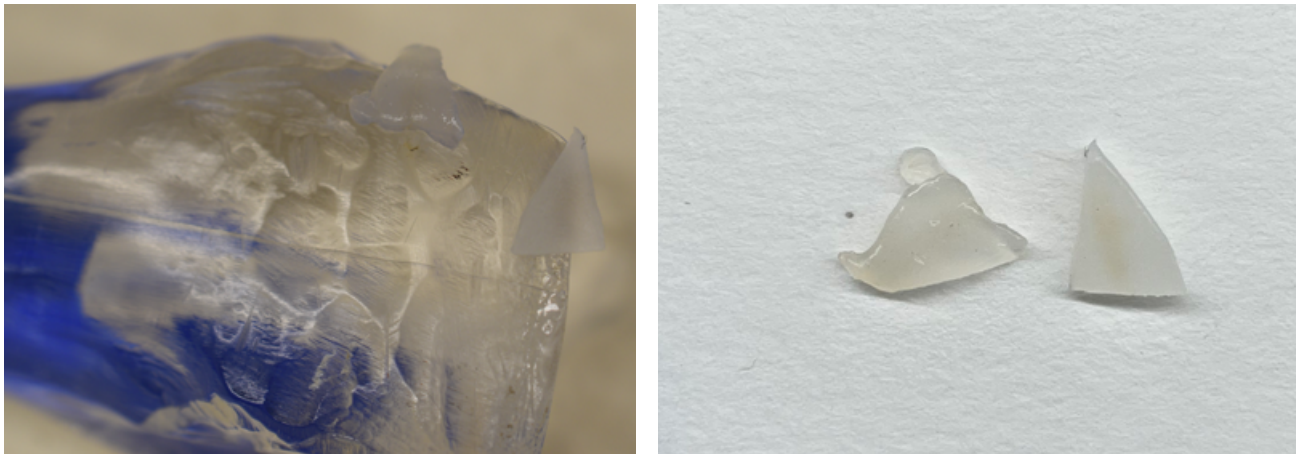

Figure 4: (Left) The gel pieces, cut up and applied on the anatomical model. (Right) The gel pieces, showing dirt removed from the anatomical model. Images by the author.

object's surface texture (Baglioni, Chelazzi & Giorgi 2015; CSGI 2015; Shashoua et al. 2021). Before proceeding with the above method across the object, a small sample of each gel was tested with this method to ensure effectiveness. Additionally, microscopic examination confirmed that use of the gels on less abraded, smooth surfaces was not distinguishable on a microscopic level. Therefore, it was concluded that cleaning could be undertaken selectively based on appearance without concern of visibly patchy cleaning at a microscopic level.

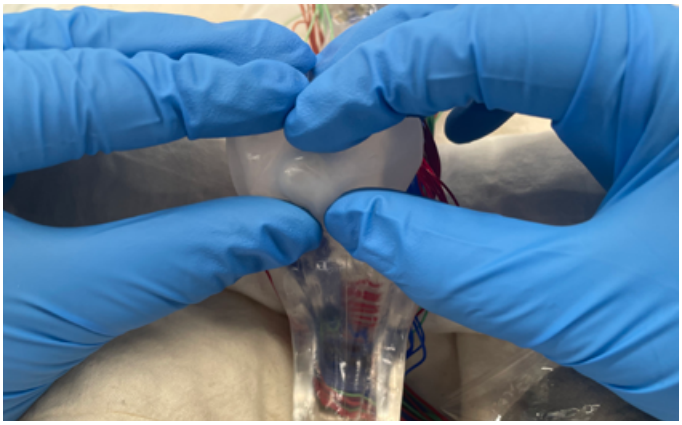

Figure 5: Hand-holding the gel for good contact. Image by the author.

Figure 6: Using the gel like an eraser. Image by the author.

Various modifications were made to the methodology as the effects of the gels were observed and dexterity was improved. Due to their slipperiness, hand-holding the gels in place was the most effective way to achieve good contact between gel and surface (see Figure 5). It also allowed contact between the gel and surface to be targeted towards areas with a build-up of dirt. This did, however, result in a much longer treatment time than anticipated. The use of weights on the gel and wrapping the gel around the object was tested, but this resulted in loss of contact and poor contact with the surface respectively. In some instances, the gel was covered with Mylar® to prevent evaporation of the cleaning solution and provide a barrier layer between gel and weights (Bartoletti et al. 2020). Covering the gel with Mylar® to prevent evaporation of the cleaning solution, used only in some instances, did not seem to improve the effectiveness of the gel. Where dirt remained following the removal of the gel, slight agitation of solubilised dirt with a damp microfibre (Baglioni, Chelazzi & Giorgi 2015, p. 107) lifted dirt in some instances, but not in others. Overall, the gels proved to be effective on highly abraded areas where dirt had collected in crevices. Where dirt remained in crevices following 2–3 applications of a gel, Nanorestore Gel® Peggy 5 Gum, loaded with 1% Orvus® WA Paste in deionised water, was used like an eraser to agitate the surface directly following use of a gel (see Figure 6). This was effective in some areas with more soiling or stubborn dirt, but not in others, which may be due to the type of dirt (sebum or carbonaceous), which was not determined before cleaning (Shashoua et al. 2021). Cleaning using this method was ceased when it seemed that remaining dirt could not be lifted without using more abrasive methods. Due to the

detrimental effects of surfactants on PVC (Shashoua et al. 2021), throughout the process care was taken to ensure that gels loaded with the Orvus® WA Paste solution did not make contact with the PVC cords. Where necessary, the cords were shielded with a blotter. The Nanorestore Gel® Peggy 6 gum, loaded only with deionised water, was run lightly over the PVC cords which resulted in a brighter appearance of all cords and some pick-up of particles.

Reflections

Following cleaning with Nanorestore Gels®, the surface of the object was significantly cleaner. Dirt was lifted from most crevices and discolouration was reduced, but some dirt and marks remain in abraded areas. The gels provided a flexible cleaning solution which could be tailored to the needs of the object. Their high liquid retention provided great control over contact between liquid and the surface, however their slipperiness posed a significant challenge on vertical and angled surfaces. As in case studies in conservation literature such as Bartoletti et al. (2020), considerable trial and error was required to develop effective methods for complex surfaces and build dexterity with the material. Early case studies into the use of Nanorestore Gel® Peggy series illustrate significant potential for the cleaning of contemporary and modern plastics and complex objects. Their use warrants further exploration, with modifications to gel formulations and loading gels with an expanded range of cleaning systems providing possible improvements to their effectiveness (Angelova et al. 2022; Bartoletti et al. 2020).

Following my experience during this treatment, I encourage my conservation colleagues to explore the use of Nanorestore Gels® when faced with cleaning conundrums. The somewhat limited scope of published research into the conservation treatment of plastics and use of Nanorestore Gels® poses a challenge to such explorations. However, as with all conservation knowledge, the more experience that is gained with new technologies, the more we can share our experiences amongst our community and provide better care for our cultural collections and problematic plastics.

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A feminist reframing:
The reconstruction of knowledge in conservation

by Eleanor S Thomas & Sarah P G Dodson

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Eleanor (Ellie) S Thomas is an emerging conservator at the University of Melbourne. She graduated from the University of Auckland with the Louise Perkins Prize in Art History and also has an academic background in psychology, and sociology. Her interest in merging feminist critical psychology with conservation began during the research for the article 'Art crime and public sculpture in Aotearoa New Zealand', published in the *Journal of Art Crime*. Ellie volunteers at the Women's Art Register and the Royal Historical Society of Victoria.

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Sarah P G Dodson is a Master's student at the Grimwade Centre for Cultural Materials Conservation. She graduated from the Ilam School of Fine Arts at the University of Canterbury with a Honours degree in Fine Arts. Sarah has a background in the arts sector, and her experience working at a notable gallery in Christchurch encouraged the long-held interest to pursue cultural materials conservation. Sarah currently volunteers at the Women's Art Register in Richmond.

[Editors' note]
Ellie and Sarah discussed the need for increased feminist discourse in conservation in assignments submitted to the University of Melbourne.
Their ideas were substantially re-worked for publication in *Scroll*.

Research shows that minority groups in the arts experience significantly reduced professional outcomes compared to men. The Women's Art Register (WAR) released findings in 1985 that made the impacts on women abundantly clear. More recently, the *Countess Report* found that the terrain for women, specifically in the arts, remains largely unchanged, despite some positive inroads in certain areas of representation (Prcevich, Richardson & Samuels 2019).

These issues of inequality are largely overlooked in cultural materials conservation, which is shielded through a veil of neutrality upheld by scientific inquiry. In this essay, we argue that — rather than perpetuating the status quo — by addressing the lack of opportunities afforded to women, Indigenous and LGBTQIA+ artists through a critical feminist perspective, the structures that conservation and its interconnected fields are founded upon can be interrogated to instil changes that benefit all in the arts. Little research addresses inequality in conservation, though a review of reports from recent years indicates that across all arts occupations, gender-related disadvantages are ongoing despite significant attention from key institutions within the sector (Throsby, Peteskaya & Shin 2020, p. 11; Perkovich, Richardson & Samuels 2019). To the authors' knowledge, there has been no research beyond the gender binary.

Looking at the early feminist movement in Australia, we begin to examine these concerns through feminist critical discourse and data analysis to consider how conservation discourse can be reconstructed to create opportunities for less dominant forms of artistic practice in archives and collections. We argue that assuming a neutral stance when dealing with loaded cultural materials eradicates a conservator's position as an activist to affect change.

The power of dominant discourses and recordkeeping

Dominant discourses have the power to shape and define what is recognised as normal practice; in cultural materials conservation, most of what comes across a conservator's bench is a product of dominant themes operating during a time in history. If conservation and conservators adopt a neutral or scientific position — a veil of neutrality — there is little pushback against the presiding narratives in history that shape culture, and, in turn, shape what is conserved.

Public museums and galleries can be seen as a shopfront of culture; what is collected and presented to the public defines taste and informs cultural practice as:

> …a complex network of relationships between individuals, texts, ideas, and institutions, with each 'node' impacting, to varying degrees, on other nodes and on the dynamics of the discourse as a whole. (Olsson 2010, p. 65)

Accordingly, what occurs in one sphere of the arts, inherently impacts others.

Michel Foucault's writings consider the difficulties in challenging — or even recognising — the long-standing structures that occur within the arts. The Foucauldian notion that power produces knowledge (pouvoir-savoir) is implicit — but theoretically evident — within the arts and conservation. Yale (2015, p. 332) posits that recordkeeping acts as an 'external memory system', and archives historically reward those who have the means to write, store, and maintain their records. Accordingly, the record of history is an authoritative but subjective narrative; one that shapes discourses and provides the means to 'do something — but only as you are able to make sense of it' (Feder 2014, pp. 55–56). As a result, dominant discourses — such as the idea of the 'superior-male-artist' — find themselves more readily accessible as they gain authority through their taken-for-granted appeal as natural common sense (Gavey 1989, p. 464). As Nicola Gavey asserts (1989, p. 462), 'Those who have the power to regulate what counts as truth can maintain their access to material advantages and power'. When unchallenged, existing power structures may continue to perpetuate dynamics that favour one group above others, and with that, conservators risk reinforcing a narrative they may wish to change (Clavir 2009, p. 139).

Historical foundations of feminism in Australia

The multiple foundations of feminism in Australia have an overlapping history; the first of which was founded between the 1880s and 1890s with a campaign labelled *The Woman Movement*, whereby there was a variety of political and social reforms to support women and children (Grace 1998, p. 133). Since this genesis, feminists — or the parties associating with feminist ideals — have evolved to reformulate feminism 'as a matter of coalition-building and sisterhood as an achievement to be worked towards rather than an expression of women's already existing identity of interests' (Grace 1998, p. 135). In 1902, women were granted the right to vote in Australian federal elections, however, this was constrained to white women (Caine 1998, p. 536). It is vital to note that Indigenous Australians did not gain the right to vote at the federal level until 1962 (Commonwealth Electoral Act 1962).

Reflecting the political and social traction of feminism, institutions followed suit with the first purchase of four botanical illustrations made by a woman, 'Miss Blythe', in 1872 by the National Gallery of Victoria (NGV) (Aitken 2020, p. ix). However, despite this acquisition, collections came largely from men who influenced what was acquired by their own prejudices (Burden 2018). The gallery employees receiving the acquisitions were men, while women were assigned administrative duties, thereby removing them from active involvement and consultation.

Analysis of the latter half of the twentieth century shows that despite great societal upheaval and reform, gender inequality is still prevalent. Reflecting on her research into gender equity in conservation in the United States, Suzanne Davis (2019, p. 207) notes that ingrained societal roles continue to shape stereotypes of the genders — including contemporary perceptions that men can hold positions of power better than women. Societal discourse grants men more authority and positions women to take up lesser roles.

Alarming statistics

One only needs to look at the demographics of the Australian parliament to see Davis's argument reflected; a study completed in 2016 found that women only made up 32 per cent of parliament, whilst the remaining 68 per cent were men (Hough 2016). The gender pay gap is still alive and thriving within occupational hierarchies across all industry groupings in Australia, where, if women work alongside men, they are more likely to be employed in junior or lower-paid roles (Senate Finance and Public Administration Committee Secretariat 2017 in Pennington & Wenlock 2021, pp. 255–256).

The subjugation of women in the arts sector was exemplified by the National Gallery of Australia; for the year 2018, the art on exhibition included only 25 per cent of women artists, with the rest being men (Prcevich, Richardson, & Samuels 2019, p. 7). Although statistically there is no lack of women producing art, the continuation of patriarchal exhibition practices reconfirms the long-standing, dominant idea that men are superior when it comes to producing art that people want to see (Phillips 2019, p. 4).

The Women's Art Register (WAR) has published a series of articles related to the concerns surrounding the 'representation of women artists across art institutions and the art world in general' (Phillips 2019, p. 4). Within, research originally published in 1985 by Merren Ricketson and Bernadette Burke, *Art in a Cold Climate*, was revisited. The research — the first of its kind in Australia — provided a quantitative and qualitative analysis of the outcomes for women in the arts (Ricketson & Burke 1985, p. 6). They found that although women were overrepresented in tertiary fine arts education, the statistics on professional outcomes and opportunities were inverted, citing a gallery director who stated, 'Men make better artists!' (Phillips 2019, p. 4; Ricketson & Burke 1985, pp. 6–8). Of the 3,381 art graduates encompassed, 58.9 per cent were women, and 41.1 per cent were men. Artists exhibiting in galleries were 68.4 per cent men and 31.6 per cent women. This imbalance is also reflected in full-time (tenured) employees at the institutions; 83 per cent were men, and 17 per cent were women (Figure 1). Further, this research found that textbooks commonly assigned in arts education featured no women artists, literature found at bookstores included a maximum of 4.6 per cent women artists, and men's representation at commercial galleries in Melbourne more than doubled that of women (Ricketson & Burke 1985, pp. 7–8).

This revisitation in the *WAR Bulletin* was catalysed by the 2019 *Countess Report*, an initiative that researches and extends the initial data points that WAR captured in the 1980s. While there appears to be an increase in women's representation in many commercial galleries and (some) major public institutions, in the 21st century the proportion

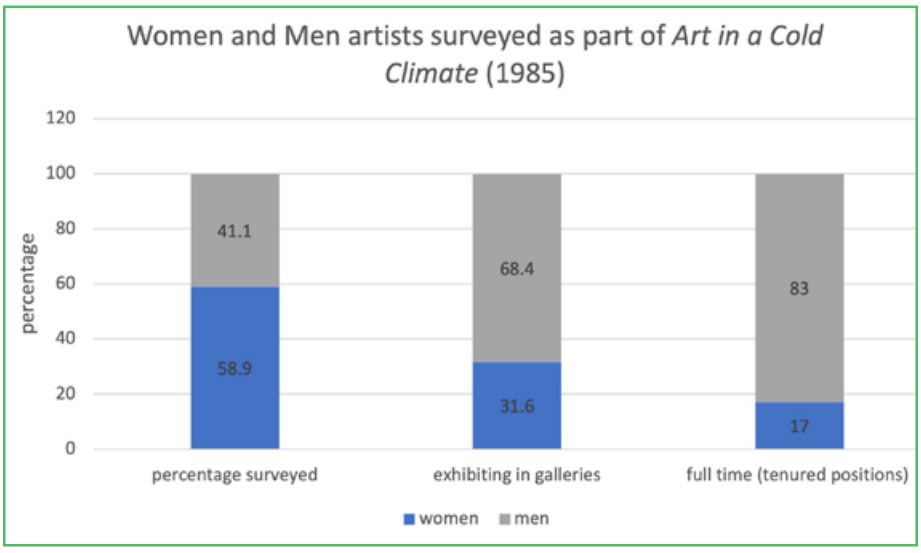

Figure 1: Percentages of men and women artists surveyed as part of *Art in a Cold Climate* (Ricketson & Burke 1985). A trend is visible using the data – men performed exceptionally well in the arts environment compared to women.

of women graduating from art schools has also increased. Recent research found 74 per cent of visual art graduates were women, but only 40 per cent of women made up the commercial and museum sector (Richardson 2016, p. 7). Therefore, this statistic shows that there has not been meaningful improvement (Prcevich, Richardson, & Samuels 2019, p. 7). Changes occur slowly; the Chief Executive Women's (CEW) 2022 census indicates if little is done to change the status quo, it will take more than 100 years before women in executive positions reach parity, with Australia falling 27 positions within a decade in the Global Gender Gap rankings for 2021 (CEW 2022; CEW 2021, p. 11).

A study conducted by Suzanne Davis in 2014 demonstrates similar disproportionate results outside of Australia. Surveying 863 members of the American Institute of Conservation (AIC), Davis found that 77 per cent of respondents were women and 19 per cent were men (Davis 2019, p. 210). Additionally, pay disparity was an issue in conservation practice; men earned 62.5 per cent more than women in full-time employment (Davis 2019, p. 205). It is important to note that a study regarding gender inequality within conservation is absent in Australia. However, drawing from the repetitive results of historic data, it is likely that similar inequalities exist within Australia's conservation sector. Notably, research has not indicated any similar surveys exist regarding Indigenous persons, people of colour, or LGBTQIA+ people, either.

The implication for conservators

The alarming statistics outlined above — while relating to women in the visual arts — are likely to have significant flow-on effects for emerging and established conservators. If women artists are not provided equal opportunities to succeed professionally and financially in the arts, the chances that their work will receive public or scholarly attention are naturally diminished. Hélia Marçal draws on the feminist scholarship of Sara Ahmed to argue that intersectional feminist theory frameworks are:

> able to discuss epistemic constructions in the ways they are situated within the political. Indeed, they highlight not only *who speaks*, but also 'whose speech gets heard and authorised as theory'. (Ahmed 1998 in Marçal 2021, p. 31; Marçal 2021, p. 31)

While Marçal acknowledges that conservation discourse has its limitations regarding how certain theoretical frameworks can be applied due to ethical and practical considerations, her suggestion that conservation is a political space destabilises the positivist notions of conservation as a neutral ground (Marçal 2021, p. 31).

Though significant cultural materials conservation scholarship focuses on interdisciplinary and cultural engagement, the lack of diversity and representation within arts and cultural preservation practice means less-dominant epistemologies and discursive alternatives struggle to enter the mainstream or remain there (Marçal 2021, p. 31). In that case, if a conservator is to inevitably adopt a partisan stance, let it not be a regurgitation of the status quo. Ahmed (1998, p. 2) puts forth a metaphor of actors faced with a script; rather than asking 'do we really even need to read this?' instead, Ahmed suggests one should challenge the script by asking 'how can we do this differently?'

Approaching conservation research from a critical feminist perspective means challenging its foundations to make sense of the implicit power structures that operate to benefit certain groups over others. The intersectional benefits go beyond feminism and into other marginalised groups that cultural materials conservation interacts with.

The veil of neutrality in conservation practice

The substantiation of a discipline relies on the history of its development to inform how the future of the practice will continue (Sloggett 2009, p. 172). The Western scientific canon brought forth during the Enlightenment period added weight and objectivity to the field of conservation as it emerged from restoration practice (Clavir 1998, p. 1). However, dealing with cultural material that implicates cross-culturalism and intersectionality cannot be reduced to a position of neutrality, despite scientific discourse offering a convenient veil that conservators can (perhaps unknowingly) hide behind.

Clavir took the Canadian International Institute for Conservation's code of ethics into consideration, citing the practice of conservation as 'All actions aimed at the safeguarding of cultural property for the future' (International Institute for Conservation Canada in Clavir 1998, p. 1). The Australian Institute for the Conservation of Cultural Materials (AICCM) elucidates with more specificity in their *Code of ethics and code of practice* by claiming, 'In the conservation of cultural material, all actions of AICCM Members must be governed by an unswerving respect for the physical, historic, aesthetic and cultural integrity of the object' (AICCM 2002). However, the language is again neutral. Ahmed (1998, p. 14) argues that 'One of the most powerful feminist critiques of modern philosophical discourse is precisely the critique of the possibility of such neutrality'. If codes of ethics imply conservators must rely on a neutral/scientific position to best attend to an object, the risk of such an approach is to leave discriminatory or exclusionary structures of power unchallenged. In fact, if Western conservation is built upon Enlightenment theories, the field is not — and never has been — neutral in its practice (Sloggett 2009, p. 171).

The notion that 'thou shalt not change the nature of the object' does not preclude one from questioning it and questioning the purpose of its display (Keene in Clavir 1998, p. 1). Challenging the accession or display of an object or artwork, as suggested by Samarasinghe (2021, p. 104), or seeking to conserve women's objects that are considered a low priority is a small but manageable step that respectfully advocates against pervasive gender inequality within the arts sector.

Practical concerns for conservation

As argued by Maura Reilly (2017, p. 24), the word feminism associates itself with anti-men agendas. This idea is learned from patriarchal mass media, in part due to Australia's dominant news corporations — including the Murdoch empire — that promote hostility towards women, notably those challenging the political sphere (McKnight in Williams 2021, p. 1). Consequently, for those accessing the mainstream media, the prejudices offered to the viewer can be reflected and accepted in their own home.

Reluctance to actively seek employment of diverse individuals creates a likelihood that institutions will conform to the status quo. Recalcitrance is further ingrained when hegemonic agendas overshadow the labour of less-dominant groups or individuals. Historically, practices involving textiles, fabric, or needlework — regardless of technical skill — were labelled as arts and crafts and snubbed from critical consideration (Grierson 2019, p. 735). These perceptions continue into the present day, exemplifying the structures that subjugate those who do not measure up to the dominant Western ideal of the superior male artist.

Despite great efforts during the 1990s to address Indigenous concerns, there has been a decline in attempts since (Janke 2018, p. 5). General momentum has subsided — much like the feminist momentum during the same era. When consulted, Indigenous people within the arts sector spoke of how Indigenous engagement was not systemic — support was not across institutions or the sector, but often consisted of limited actions and tokenism (Janke 2018, p. 6). In response, the Australian Museums and Galleries Association Incorporated (AMaGA) published *First Peoples: A roadmap for enhancing Indigenous engagement in museums and galleries* to ultimately change the Australian view of First Peoples and bring about cultural revitalisation (Janke 2018, p. 3). This keystone document provides a series of targets for AMaGA to implement within their institutions within a timeframe of ten years. The publication of this unparalleled document placed Indigenous concerns at the forefront of collection care and representation, which makes it a significant roadmap for institutions to follow. However, in the instance that targets are not met, we suggest that the conservator holds institutions accountable by taking an actionable stance to achieve AMaGA recommendations. While an individual conservator may feel powerless to affect change at an institutional level, that is exactly how pouvoir-savoir operates; if we acknowledge the power, we can begin to address the structures that keep it in place.

If our society is on the precipice of social change, it is a question as to whether conservators will feel compelled to follow; what the institutions collect,

conservators must conserve. For the audience, unfamiliarity can be challenged by repeated exposure to build familiarity. As Sloggett (2016, p. 123) argues, conservators must relinquish their role as the voice of authority; conservation must move outside of institutions and into the community (Denes 2014, pp. 372–373). In an era where historicism is dead, conservators must figure out how to survive.

Activism

For close to five decades, those involved with the Women's Art Register (WAR) have fought against dominant power structures by advocating for women in the arts and conserving their practices while providing public and academic access to research the WAR archives (WAR 2021). Their ongoing project, *This is WAR!* conserves intangible aspects of the archive by presenting women artists' histories as living and present, documenting the locations of their challenges, successes, and learnings on an interactive Google map overlay of Melbourne (WAR 2021). By providing participatory involvement with an active community of women artists and stoking alternative forms of engagement with archival materials, it is an act that pushes back against the 'epistemic framework that deems … conservation as an object-oriented practice' (Marçal 2022, p. 31).

The Australian Queer Archives (AQuA), established in 1978, houses the largest collection of Australian LGBTQIA+ material (AQuA n.d. a). This significant collection is led entirely by volunteers and is a not-for-profit community-facing organisation. Like WAR, AQuA promotes itself through active engagement with the community by producing exhibitions, publications, public talks, and seminars. To encourage queer voices in academic discourse, AQuA gifts a biennial prize for a thesis published by a postgraduate student — the published thesis then becomes a permanent record in their archive (AQuA n.d. b).

Similarly, Koorie Pride Victoria (KPV), an Indigenous-led organisation, was established in 2019 to protect and ensure the continuation of cultural heritage that encompasses ideas of sex, sexuality, and gender-diverse communities. Through storytelling, KPV engages with the Koorie community and other minority groups to form networks (KPV 2021). KPV's aim is to act with significance regarding empowerment to encourage visibility by building on existing or cultivating new ways to bring about social and cultural change through connecting, supporting, and empowering Aboriginal and/or Torres Strait Islander communities identifying as LGBTQIA+ mob living in Victoria.

Reflecting on ethical considerations within conservation, Henderson (2020, p. 205) argues that 'conservation's commitment to extending the lifetime of things pins us to an outdated perspective where access and preservation are in conflict, with our perceived moral obligation to serve it, even when that future consumption may never arise'. It is the less-dominant forms of conservation practice that are at odds with an overly positivist approach to conservation, and this is where space can be made to represent culture and communities equitably. Indeed, if conservation is to continue to grow in relevance and diversity as a field that is genuine about its engagement in cultural practice, seeking approaches that aim to decentralise knowledge production is a fine place to begin.

Conclusion

It is difficult to isolate the field of conservation from the richly interconnected structures that facilitate its knowledge production; doing so would discredit the significant interdisciplinary contributions the profession makes within the sciences, arts, and the public forum. However, conservation cannot rest upon positivist principles that enabled the practice to legitimise itself out of the restoration trade. There is much more room for cultural materials conservation scholarship to theorise discourse; approaching conservation research from an activist/feminist perspective creates necessary challenges to its foundations. Decentralising knowledge production in favour of approaches exemplified by grass-roots organisations such as WAR, AQuA, and KPV shows how inhabiting a subjective position can meaningfully increase equity and visibility for marginalised groups in the arts without denigrating the achievements of others. If one is to acknowledge

that power inherently dictates the record of history, then history will tell us that neutrality *is* a stance. Neutrality leaves little room for anger, feelings of injustice, discontent — or any compelling emotion powerful enough to affect change. We encourage conservators to step out from behind the veil of neutrality and to recognise the power of subjectivity to construct a more equitable record of history for the future.

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Experiential learning:
The treatment of Baskerville's Virgil

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I started the Master of Cultural Materials Conservation program at the University of Melbourne at the beginning of 2020 and did not foresee spending the bulk of my study learning remotely at home. Luckily, in between Melbourne lockdowns, I was able to complete the practical portions of the degree in person, but as I was nearing the end of the course, I felt like I had missed out on typical learning experiences that would have developed my hand skills and confidence, such as volunteering for projects. To better prepare myself for my quickly approaching graduation, and facing a competitive job market, I sought an internship with Karen Vidler at Book Conservation Services (BCS) in Adelaide.

After a lovely interview, Karen was generous enough to take me on for a six-month, part-time internship at her conservation bindery in Adelaide. The mission of BCS is to provide high quality conservation services to archives and books while also seeking to 'pass on our skills to both beginners and professional bookbinders and conservators through workshops and internship training' (BCS n.d.). Specifically, the goal of my internship was to work under the guidance of Karen, as my internship supervisor, to undertake the conservation treatment of two books from the Barr Smith Library, Rare Books and Manuscript, Adopt-A-Book Program, an initiative of the Friends of the University of Adelaide Library. This program allows donors to directly sponsor the cost of conservation treatment of a book within the 'University's extensive and varied teaching and research programmes' (UoA 2021). This article will focus on the treatment pathway of Virgil's *Publii Virgilii Maronis Bucolica, Georgica, et Aeneis*, Birminghamiae: Typis Johannis Baskerville 1757, which is an early and curious example of wove and laid paper in a bookbinding.

Baskerville's Virgil

John Baskerville was an English type founder and printer who was considered a 'complete printer' (Archer-Parré & Dick 2017 p. 1; Benton 2016, p. 1). He was constantly improving all aspects of printing, from cutting and casting type (such as the serified Baskerville typeface), to

refining inks, and experimenting with papers (Archer-Parré & Dick 2017 p. 1; Whyman 2017 p. 93). In 1757, after seven years of meticulous work and numerous delays, Baskerville completed his first publication, Virgil's *Publii Virgilii Maronis Bucolica, Georgica, et Aeneis*, (Archer-Parré & Dick 2017 p. xvi; Benton 2016, p. 27; Whyman 2017 p. 93).

While the evidence is not conclusive, Baskerville was likely involved in the papermaking process for this volume, as he was seeking a smoother paper surface to show off his typefaces and inks (Benton 1968, p. 12; Whyman 2017 p. 98). There appears to be variation between copies of the book, as evidenced by a range of printing errors, but consistently across various copies, about one third of the book is made of wove paper with the rest of the book on laid paper (Hazen 1937). The inclusion of wove papers is one of the earliest examples of wove papers seen in a European book (Archer-Parré & Dick 2017 p. 98; Benton 2016, p. 28; Hazen 1937). Researchers have described this book as a 'landmark in the history of typography' (Benton 2016, p. 28). The Baskerville typeface is still one of the most enduring and influential typefaces (Archer-Parré & Dick 2017 p. 1).

Figure 1: Before treatment. The front board was completely detached from the rest of the book. Image courtesy of Book Conservation Services.

Treatment goals

My only experience up until this point had been in treating flat works that were not handled regularly. This book was completely different; it is a three-dimensional structure, comprising a range of materials, varying papers, and is handled in a reading room. At first glance I was completely overwhelmed and did not have the slightest clue how to approach this book. Before undertaking any work on this important book, my supervisor Karen and I reviewed the *Principles of Conservation* to determine an appropriate treatment proposal for the book (ICON 2020). The *Principles* were a good reminder to understand the issues regarding the conservation treatment of this specific book, and to consider the underlying causes of deterioration, the significance of the book, and its end use. The final treatment proposal aimed 'for the best quality and most sustainable action achievable with available resources' (ICON 2020).

Condition

The final goal of the treatment was to make the book stable. When I was presented with this important book, the most obvious and concerning aspect was that the front board was completely detached from the rest of the book (Figure 1). The lacing slips had failed at the front joint, and the back board was

still attached, but the leather joint was splitting at the head and tail, and honestly, looked like it could not withstand much handling at all. Both of the endcaps displayed mechanical loss due to handling but thankfully both of the original endbands were intact (Figure 2). Three of the four corners had lost the covering leather and the board had begun to delaminate at these areas. The full brown calf leather had delicate double gold rule lines but was scratched, stained, and was exhibiting signs of early acid decay, particularly at the spine, as seen by colour change at areas of grain layer loss and a slight acrid smell.

Overall, the condition of the binding was fair, with the front flyleaves missing. The textblock was in remarkably good condition, which is surprising for such a regularly handled book. The folios were generally bright and clean but were slightly, naturally discoloured. The title page displayed leather burn from the covering leather (suggesting it has been unprotected due to missing flyleaves for some time).

Figure 2: Before treatment. Loss of leather at the front joint and at the tail cap, but the endband was still intact. Image courtesy of Book Conservation Services.

Materials identification

Before beginning the treatment, my supervisor and I spent some time examining the material aspects of this book to gain a deeper understanding of the original materials, and the damage. A small Dino-Lite digital microscope was used to confirm the printing techniques within the textblock. The microscope confirmed the printing process was letterpress printing, due to the slightly uneven edges of the lettering (Gascoigne 2004, p. 49 c, d). Figures 3 and 4 show the slight variation of the printing results on the laid papers and the wove papers. The comparison of the letter 'm' shows a more even distribution of the ink on the wove papers.

Figure 3: Example of the letterpress printing on the wove paper, the ink is even in coverage. Image by the author.

Figure 4: Example of the letterpress printing on the laid paper, the letter is slightly less even in finish than the printing on the wove paper. Image by the author.

With the aid of the digital microscope, the covering leather was viewed under magnification to identify the type of leather used to cover the book. Identification of the leather is important when considering infill materials for areas of loss, such as the corners and at the joint of the front board. The covering leather was positively identified as calf leather (Vidler 2021). This was determined by the specific arrangement and distribution of the hair follicles forming the grain pattern across the surface of the leather. This pattern was present across both boards and the spine. The leather on the spine label displayed a different pattern of hair follicle clusters, which is visually consistent with sheep leather and the tanning process of Roan leather tanned with sumac (Vidler 2021). This pattern was more difficult to see but the pattern was confirmed to be sheep. This is consistent

with the practice at the time: sheep leather was easy to split due to its fibre structure and cheaper to tan, which made it suitable for spine labels for books.

The most thrilling aspect of the materials identification was viewing the paper through transmitted light. Now knowing more about the legend of this book, it was fascinating to observe the range of papers through transmitted light. The laid paper was smooth, almost shiny, and had perfectly formed chain and laid lines, but no watermarks were seen throughout the textblock (Figure 5). The wove paper was inconsistent in finish and weight, and many of the individual leaves were uneven in the distribution of paper fibres. Figure 6 shows an area of uneven distribution at the bottom corner of the leaf. Numerous leaves had a slight deckle edge, generally at a corner, which I suspect was not intended to be there because the deckle did not run the length of the foredge and was not present on the laid paper leaves.

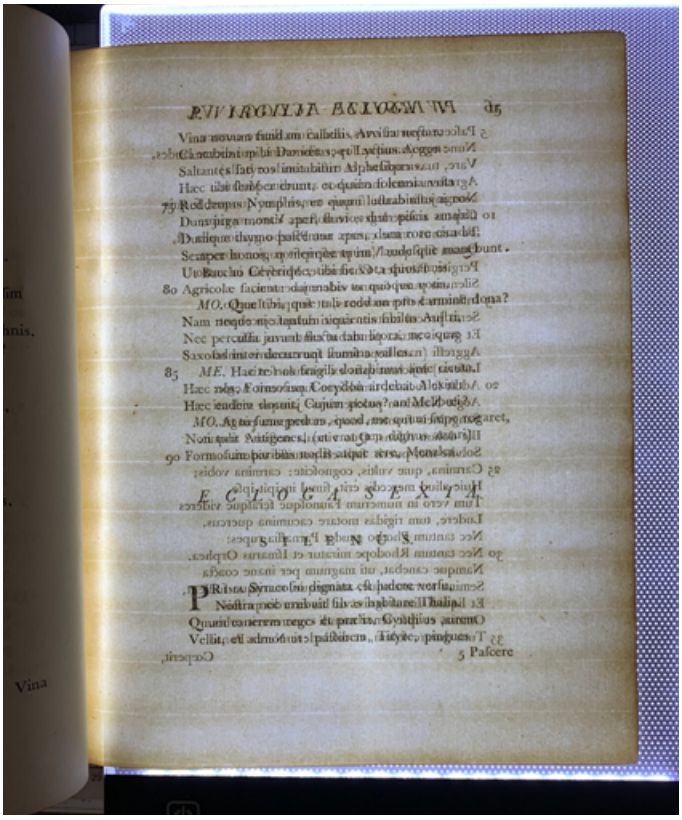

Figure 5: Example of the laid papers. They are generally consistent in weight. The chain and laid lines are clearly visible when viewed using transmitted light. Image by the author.

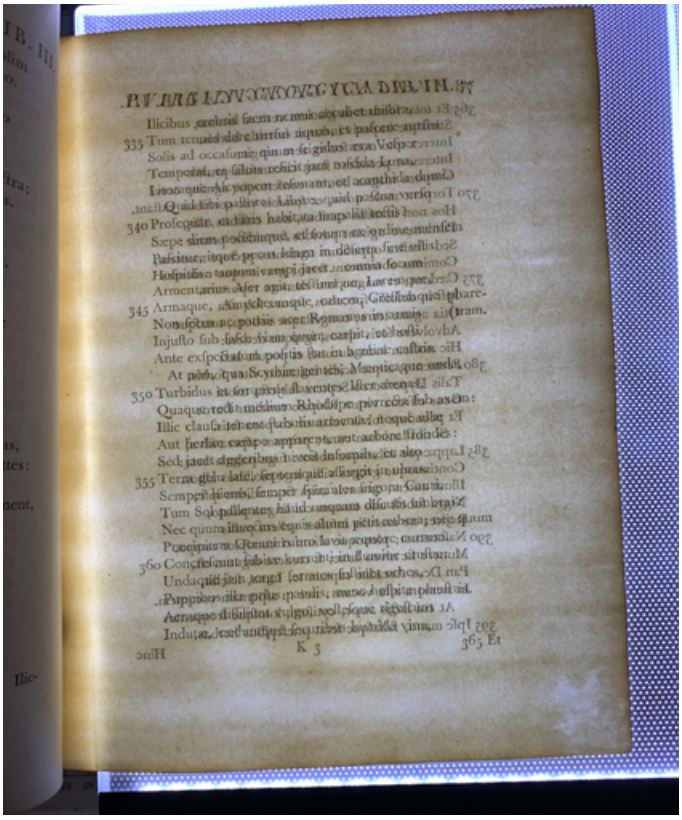

Figure 6: Example of the wove papers throughout the book. Small areas of imperfection at the tail foredge of the leaf. These leaves appear to have been made on an adapted laid paper mould due to the concentration of fibres where chain lines would typically appear. Transmitted light confirmed these are examples of true wove paper. Image by the author.

Treatment pathway

After fully exploring all aspects of the book and receiving approval from the University of Adelaide Library, it was time to begin the treatment. I was terrified, but over the course of my internship, my supervisor had been slowly building my skills through less complex treatments, making a book model, short demonstrations, and many discussions. I started with an area I was more familiar with: the treatment of the text block.

Phase 1: Textblock treatment

The textblock was mechanically cleaned to reduce surface deposits and I focused on the head edges, where most of the dirt and dust was deposited. Next was replacing the lost flyleaf. To better protect the title page, an appropriate replacement paper was identified in consultation with the client and was sewn into the textblock in keeping with the attachment of the back endpaper. The intact flyleaf at the back of the book was viewed through transmitted light and used to inform the paper choice (Figure 7 and Figure 8). There was a single loose leaf of paper present in the book, but after viewing it through transmitted light, it was determined to not be original to the book. Examination revealed the chain and laid lines were wider than the intact flyleaf and the paper maker's watermark was not observed anywhere else in the textblock. This leaf was flattened and retained in a Mylar® sleeve to be returned with the book to the client.

Following the dry cleaning and replacement of the front flyleaf, a few small tears were repaired, and a small area was infilled with Japanese repair paper before moving onto the treatment of the binding.

Figure 7: Observing chain and laid lines in back flyleaf to inform the paper choice for the replacement flyleaf at the front of the book. Image by author.

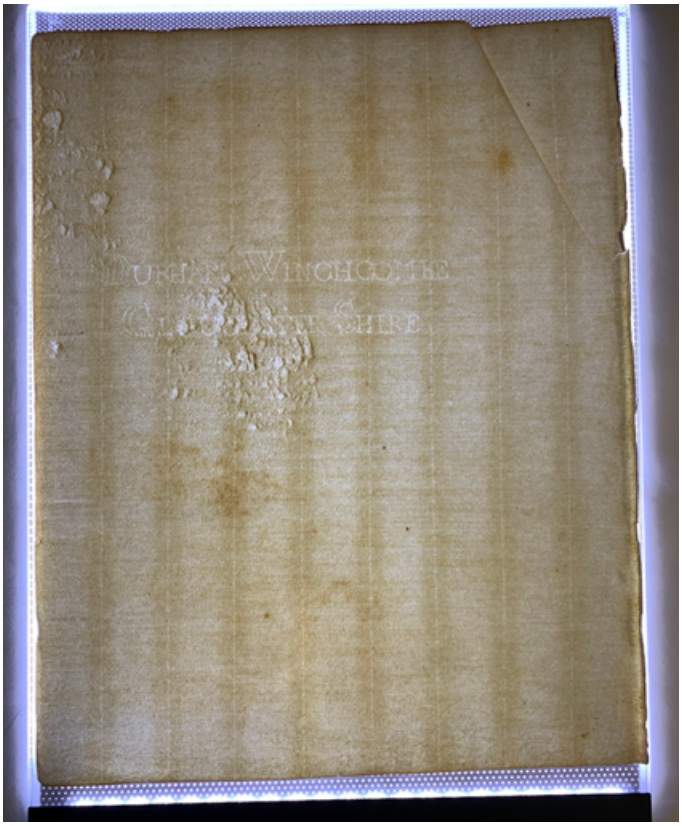

Figure 8: A loose leaf was placed at the front of the book, but through observation under transmitted light and comparison to the intact flyleaf at the back of the book, it was determined this leaf was not original to the book. It did not match the chain and laid direction and it even had a watermark which was not seen elsewhere. Image by author.

Phase 2: Binding treatment

The focus of the binding treatment was to retain as much original leather as possible while also strengthening and supporting the boards. Before undergoing more interventive treatment, the areas of the covering leather exhibiting early signs of acid decay were consolidated. Particular areas along the spine, joints, and endcaps were faced with a temporary tissue to strengthen the leather as much as possible during the handling of the book and during leather treatment (Figure 9).

Figure 9: During treatment. Linen sutures at head and tail to reduce the warping of the boards. Image by the author.

Figure 10: During treatment. Linen sutures at head and tail to reduce the warping of the boards. Image by the author.

The first major step was attaching unbleached leather cord extensions to the broken lacing slips and then reattaching the board using the original lacing paths (Figure 10). While it all seemed like it would be strong enough, in reality, the front board was warped (suggesting the board had been detached from the binding for many years) and would not sit evenly on the textblock. We determined small board sutures between the board and covering leather would sufficiently reduce the warping of both boards at the head and tail joint areas.

Figure 11: During treatment. Preparation of paper pulp. Image by Karen Vidler.

Up next was preparing the board corners for leather infills. The corners were infilled with paper pulp and adhesive to support the replacement leather (Figure 11). These corners were incredibly time-consuming but it was so satisfying to complete all

the stages and look at their final shape (Figure 12). This step strengthened the corners and created a foundation for the archival calf leather which was dyed with conservation leather dyes. These dyes were selected to match the depth and colour of the original covering leather. In theory, it shouldn't have been too difficult but I found colour matching to be quite challenging as this book had seemingly infinite shades of brown. Finally, after endless rounds and adjustments, all infill leather and repair papers were dyed to match and ready for placement. Both endcaps were replaced, areas of loss along the joints were infilled, and the corners were also infilled.

Figure 12: During treatment. Corner infill ready for leather. Image by the author.

Working with the leather was such a complex and fascinating process. Each piece of leather underwent an extensive preparation process, which I didn't fully appreciate until I carried it out. After selection, the leather was roughly cut to shape and then painstakingly pared back, bit by bit, until just the right thickness was achieved (Figure 13). The thickness was determined by the function of the piece and each required a unique thickness distribution. Needless to say I became very familiar with all manner of scalpel blades.

Figure 13: During treatment. Dyed leather repair infill pieces cut to shape and ready for placement. Image by the author.

The final stages included the consolidation of the front inner hinge using an extended hook guard, and the back inner hinge was also consolidated using a suitable weight Japanese repair paper. After slight blending of the joint repairs using a toned acrylic wax, the conservation treatment was complete! See Figures 14–17.

Figure 14: After treatment. Front board of book. Image by the author.

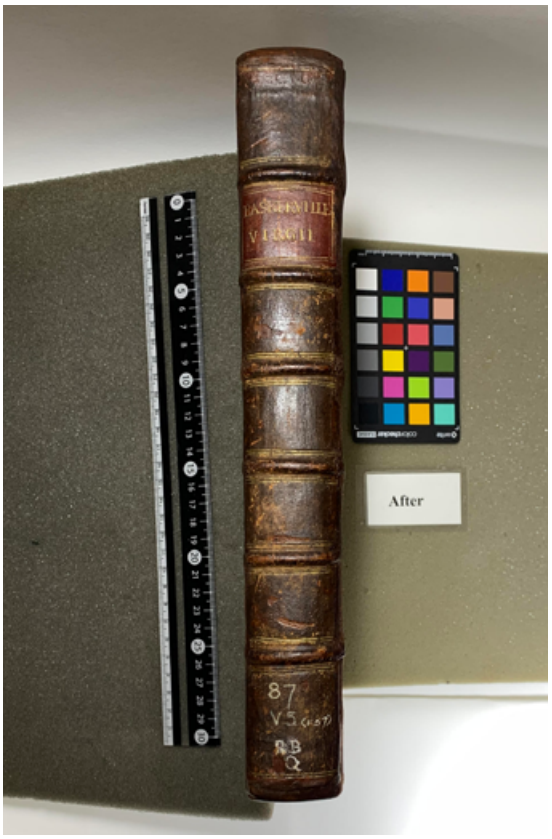

Figure 15: After treatment. Spine of book. Image by the author.

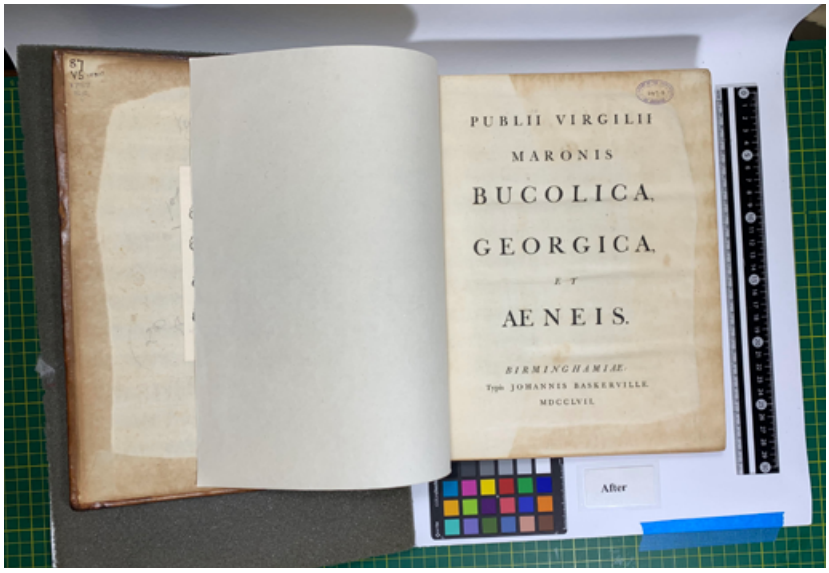

Figure 16: After treatment. Replacement flyleaf and opposite the title page. Image by the author.

Figure 17: After treatment. Corner and edge repairs with paper and leather. Image by the author.

Treatment outcome

The treatment was successful due to the support of my supervisor. The book was returned to the University of Adelaide Library collection in a stable condition with the boards reattached and supported. The treatment carefully balanced the goal of retaining as much of the original material as possible while also considering the end use of this book. The book is now stable enough to be brought into a reading room and handled by researchers.

Summary

This treatment was successful in many ways, but most importantly, the book is now in a condition that allows it to be handled safely without incurring more damage. Additionally, the book provided me with an excellent opportunity to learn. Through this conservation project, I was given the privilege of really becoming familiar with a range of materials and applying the theory of conservation in practice. The final treatment adhered to the proposed treatment but there were a few instances where the materials did not respond as predicted and required adaptation and ethical decision-making which considered the unique characteristics of the book and its final use within a collection.

Personally, I found working with the repair leather to be the most challenging. I have specialised my area of study to paper, which in some contexts includes books, but working with the leather was very difficult at times and completely different to paper. It required me to practise and develop a better understanding of its working properties before applying it to the book. This was a good lesson in patience and reminder of the importance of skilled conservation professionals. My supervisor's expertise and support led me through every step of this treatment process. She provided me with an environment to practise and develop my hand skills in a way that cannot be replicated in a university course environment. I am extremely grateful to have had the opportunity to learn from her and gain a greater confidence in my conservation practice.

ACKNOWLEDGEMENTS

I thank the University of Adelaide Library, and the Adopt-a-book program for allowing me the opportunity to learn so much from this beautiful book.

I also am extremely grateful to Karen Vidler and Brendan Ruck of Book Conservation Services for supporting my learning and always being so generous with their knowledge, expertise, and time. I know I will look back at my time at BCS as foundational to my conservation career.

Also, thank you to Yuhong Zhang for being such a kind and supportive peer.

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Down the maternal line:
Intergenerational pottery practices in Barichara, Colombia

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Maité Robayo is an emerging conservator from Colombia, who graduated with a Master of Cultural Materials Conservation degree from the University of Melbourne in 2019. She specialises in objects conservation, with a focus on ceramics. Currently, Maité is interested in traditional knowledge conservation, Indigenous communities, and archaeology.

[Editors' note]
Maité discussed traditional Barichara pottery in an assignment submitted to the University of Melbourne.
Her ideas were substantially re-worked for publication in *Scroll*.

Cultural heritage refers to the objects, practices and knowledge expressed by a community, through diverse cultural representations, including in forms such as crafts. Consisting of both tangible and intangible aspects, cultural heritage is an important part of community identity. Some objects manifest cultural heritage value beyond their physicality (Appelbaum 2012, p. 11), and, in some circumstances, this value is passed from one generation to another as traditional knowledge. However, the knowledge and skills behind traditional practices cannot be conventionally conserved using laboratory techniques. As a result, methodologies like ethnographic documentation are required to ensure the preservation and maintenance of such activities (Wain 2014, p. 53).

In 2019, as part of my minor thesis, I investigated and documented the intergenerational pottery practices in the town of Barichara in Colombia. I spent three months there, interviewing local artisans, recording and examining their materials, and observing their techniques.

Introduction

Pottery production is practised the same way as it was before colonisation in the town of Barichara, where traditional knowledge about pottery-making continues to be handed down from generation to generation. Despite this, there is very little documentation of the practice, its materials, and techniques. This article investigates the Barichara region's intergenerational pottery practices and fills the gaps in the literature about their pottery production. Using a conservation perspective, I conducted fieldwork with the artisans of Barichara and surrounding villages, and documented the materials and manufacturing methods developed by the artisans.

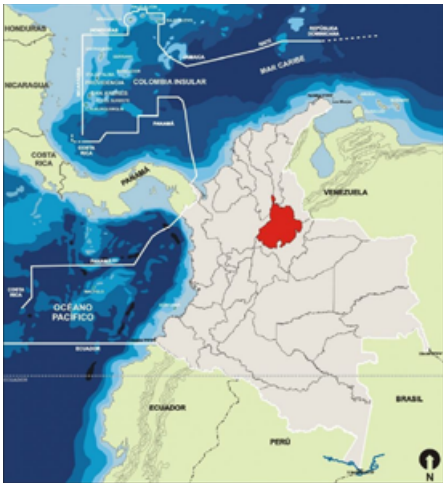


Figure 1: Barichara is located in the department of Santander (red), in the northeast of Colombia (grey). Diagram by Sociedad Geográfica de Colombia, 2002.

Barichara is a town in the department of Santander, in the northeast of Colombia (Figure 1). The town is about 328 km from Bogotá, the capital city of Colombia. Barichara has an altitude of 1336 m above sea level and is bordered by the Suárez river basin to the west. As a result, the weather is warm, with temperatures between 19 and 28 °C (Alcaldía Municipal de Barichara en Santander 2017).

Figure 2: Barichara limestone street. Image by the author, 2019.

The history of Barichara has always revolved around its limestone, which is used all over the town to construct homes, churches, and streets (Figure 2). Because of this, the town was named the most beautiful village in Colombia in 1975 (Silvia 2001, p. 123). In 1978, decree No. 1654, established by the Ministry of Culture, declared Barichara a national monument and a site of national cultural interest, and in 2010, it was added to the Tourist Network of Heritage Villages of Colombia (Cote 2014, p. 168). The aforementioned features of the town have made an essential impact on how the craft activities of Barichara are perceived and have added significance to the study and conservation of local practices such as traditional pottery.

Even before Spanish colonisation in the mid-16th century, in what is known today as the town of Barichara, the local pottery traditions have been developed by the elders and passed through generations (Salazar & Serrano 2017, p. 7; Tarazona & Bonilla 2017, p. 248). Nevertheless, there is insufficient academic documentation of the traditional techniques and associated knowledge. My research and resulting documentation provides recognition of the importance of the traditions and contributes to the ongoing conservation practices occurring in the Barichara community.

Historical and cultural significance

The Guane Indigenous people inhabited a part of the land of what is known today as Barichara (Pita 2013, p. 296). The indigenous group was one of the biggest in the region in this part of the country. However, after the Spanish conquest in 1540, the population dropped dramatically; according to Tarazona and Bonilla (2017, p. 243), between 1560 and 1572, the Guane population was only 1,000 people. Due to the prevalence of interracial relationships in Colombia, today there are very few Guane families without Spanish ancestry (Serrano 1989, pp. 6–7). Guane pottery production started sometime between the 13th and 16th centuries (Guerrero Rincón & Martinez Gamica 2013, p. 5). They were known for making diverse types of ceramic objects with ritual and utilitarian aims, and manufactured pots and earthenware to be sold (Tarazona & Bonilla 2017, p. 248).

Today, the pottery created in Barichara retains some of its original indigenous characteristics, such as its traditional production and utilitarian style, as well as the aspect of being passed down from generation to generation (Salazar & Serrano 2017, p. 7). However, according to Salazar and Serrano, only 41 people work in the

production of different types of crafts, which is just 4.8% of the population of Barichara (2017, p. 3). Initial investigations during fieldwork found only six people still practising pottery-making and its associated lifestyle in Guanentá and Lubigará, two villages inhabited by the Guane Indigenous group that are close to Barichara. Of these potters, just three are still active and use traditional techniques.[1]

Furthermore, as the last people to practise this form of pottery-making — and therefore embodying a high level of knowledge and skills in developing the craft and associated way of life — the carriers of this tradition can be considered as Living Human Treasures, as defined by the Korean National Commission for UNESCO (2002, p. 19). This fact highlights the importance of documenting both the pottery-making process and its associated knowledge, as a safeguard against the risk of the practice disappearing.

Creating a repository to aid local conservation outcomes

The significance of this research lies in acknowledging the intergenerational pottery practices of the Barichara people and region, and developing awareness for the unique characteristics of their processes, as their craft is a continuity of indigenous traditions (Broadbent 1974, p. 238). The documentation in this fieldwork serves as a method for conserving the embedded knowledge in Barichara pottery, and for recording its importance to the people involved in it (Dijakovic et al. n.d., p. 11). The information obtained aids conservation outcomes by creating a multimedia repository (Kirshenblatt-Gimblett 2014, p. 57). Additionally, the research creates a broader picture of the forms of cultural exchange in pottery practices across the region. As such, it helps to strengthen links between different traditional pottery practices and other tangible heritage across the continent.

Research design and methods

Based on the above, the research questions forming the basis of the project were as follows:

- What types of materials do the artisans use, and how are they obtained?
- What types of technology do they use, and what are the different steps of pottery making?
- Can the documentation of materials and techniques provide a repository that supports local conservation outcomes?

In response to these queries, video recordings, photographic records and notes were taken of the materials and techniques used by the artisans. Herein, documentation is used as a medium to conserve and safeguard the tradition (World Intellectual Property Organization 2017, p. 11).

1 Two of the known practitioners — Maria Del Carmen Romero Romero and Herminia Arciniegas — had stopped the activity because of their advanced age, whilst a third artisan, Ana Ortiz, was not contactable.

Methodology

I undertook fieldwork to facilitate the collection of data (Creswell & Poth 2018), using a qualitative research methodology that applied a 'creative interviewing' approach (Mason n.d.). This methodology is commonly used for ethnographic encounters to explore different 'verbal and non-verbal dimensions' (Mason 2010, pp. 2–3) that allow the interviewee to talk freely about different aspects of their life and work. My approach was conversational, using the interviewee's language, with the aim of giving 'voice to people in their own local context' (Fetterman 2010, p. 1), rather than a more structured question-and-answer technique.

Figure 3: The artisans, left to right: Medarda Torrez de Beltran, Johanna Rodriguez and Bernarda Ortiz. Images by the author, 2019.

The subjects

All the potters interviewed for the research were women who learned from their mothers the tradition of making utilitarian ceramics entirely by hand, without tools such as wheels or moulds.[2] My fieldwork focused on three artisans: Medarda Torrez de Beltran, Jhoanna Rodriguez, and Bernarda Ortiz, shown in Figure 3. The potters reported that it takes around two years to learn the traditional pottery techniques, and due to its labour-intensive nature, not everybody is interested in undertaking such a demanding job. The artisans continue with the ceramic production for financial reasons, but this is not their only source of income.

2 When men are involved in the process, they are usually the husbands or sons of the artisans and it is often only for their experience in identifying materials, and for their physical strength required to carry the raw materials (Arnold 1991, p. 32).

Medarda Torrez de Beltran

Medarda is 74 years old and lives in the Lubigará village with her family, where she has been making pottery for 60 years. She remembers learning the activity by watching her mother doing it, as the knowledge is handed down from the maternal line. From her family, only Medarda studied the entire process; from the collection of the materials through to firing. Her husband used to help her with the extraction of the materials, but after he passed away, her grandson and son-in-law help her, sporadically. This is one of the main reasons why Medarda does not produce pottery as frequently in comparison with the other two potters interviewed. When Medarda is working, she starts early in the morning, preparing the materials to make the objects — usually, she is surrounded by her two little dogs, Luna and Lucas. An individual characteristic of Medarda's process is that during the bonfire, she whistles to the air; she does it because she believes in this way she 'calls the wind' to increase the airflow for the fire.

Bernarda Ortiz & Jhoanna Rodriguez

Bernarda is the mother of Jhoanna, they live together in Guanentá village. Bernarda's mother, Feliza Alquichire, was a well-known traditional potter in the region. Her family is one of the last direct descendants of the indigenous Guane as the surname Alquichire has indigenous roots (Lucena 1974, p. 192). Feliza Alquichire practised the pottery-making tradition for 77 years until the age of 85, and her work is not forgotten by the community of Barichara, where she has a permanent museum exhibition. As with Medarda Torrez de Beltran and Feliza Alquichire, Bernarda Ortiz learned by observing her mother. She is 63 years old and started when she was 12 years old. Of nine children, she had only one, Jhoanna Rodriguez, who wanted to learn pottery practice.

Jhoanna began learning at the age of 15. Today, she is 31 years old, and, like her mother, is active in the craft. For both potters, their husbands are the ones who help them to gather and prepare the materials and set up the fire. Mother and daughter share a close relationship and work together from 6 am to 12 pm, while they work they talk about life and their work.

The materials used and how they are obtained

The artisans first source their materials for pottery production. The clay comes from a mine at the top of a mountain in Guanentá village that is only partly accessible by vehicle, so gathering the material requires the artisans to walk some distance to the mine. With assistance from male family members, the clay material is transported using a mule, motorbikes, and in some cases, a truck. Rocks are used as a temper,[3] and the materials used for this temper are gathered from different

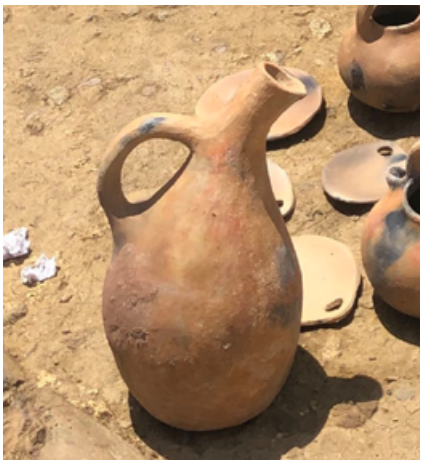
3 Temper, or fillers, is the element added to the clay to change its mechanical properties and malleability; in this case, rocks are added as a temper.

locations. Based on their characteristics, it could be suggested that the type of rocks used are either metamorphic or igneous (Matthews 1981, p. 58). Once collected, the rocks are fired to soften them for crushing, and the clay is dry-crushed and mixed with water to create a paste.

The pottery-making process and technology used

The process of making pottery starts at the artisans' studios, which Mora (1974, p. 25) notes are commonly located in their own homes, as was the case with the artisans in this research. Crushed rocks (temper) are mixed with the raw clay in an action called majar, which involves kneading the mixture by foot. In forming the pottery, each of the artisans use coiling, pinching, and hand-building as their primary methods. Simple tools such as spoons are used during the manufacturing process to shape, carve, and finish the different objects. Often, the only finishing technique applied is scraping off excess clay to even out the exterior of the objects before their firing. Figure 4 illustrates the most representative objects the artisans create.

Olla (Pot)



Múcura (Pitcher)

Sarten (Saucepan)

Ure (Jar)

Chorote (Jug)

Tejos (no direct translation)

Figure 4: Representative objects created by the artisans. Images by the author, 2019.

Ground stone | Totumo spoons | Moulds

Figure 5: Three of the tools used by the artisans of Barichara. Images by the author, 2019.

Some of the main utensils used are the ground stone, the cuchara de totumo ('totumo spoon') and the tejo ('mould'), shown in Figure 5. The ground stone, consisting of a mano (Spanish for 'hand') and metate (the larger stone surface), is employed to hand grind the materials, including the rocks used as temper (Adams 2013, p. 102). The cuchara de totumo is created from a totumo, the fruit of the Crescentia cujete plant, also known as a calabash tree. The spoon is used to shape, remove excess clay, and soften the surface of each object before firing. The tejo, which acts as a base to make and shape new objects, is often made from objects that have broken in previous firings.

The artisans use bonfires in the firing process (Figure 6), and so the weather regulates their production schedules (Arnold 1991, p. 16). The burning takes place in the backyard of the artisan's house and is always built in the same place. Wood sticks, cow dung, and hemp fibres are used to ignite the fire, which helps to attain the required characteristics of the firing, including relatively low peak temperatures and quick heating rates (Livingstone Smith 2001, p. 991). After approximately one hour of firing, the objects are removed from the bonfire with the aid of wood branches.

Figure 6: The bonfires and firing processes used by the artisans. Images by the author, 2019.

The ceramic products are sold directly from the artisans' homes. The price depends on the size of the object and can fetch the equivalent of $2 to $60 (AUD). Unfortunately, not many people are aware of the hard work behind the objects and this underappreciation of traditional pottery adds to the decline of the activity.

At the time of the investigation, no effort was found from the local government to revive the practice. However, there is an institution in the town that aims to preserve the cultural heritage of the region by teaching some traditional skills: Fundación Escuela Taller Barichara (Barichara Workshop School Foundation). Among the exhibits at this institution are some pots made by the mother of Bernarda, Feliza Alquichire, but there is no mention of the other artisans. There are programs to educate the locals about contemporary techniques, but none exist for traditional pottery-making. Therefore the tradition has been fading, perhaps due to the hard work involved in all stages of ceramic production from the extraction of raw materials, to processing, production and firing.

Conclusion

My investigations found that the materials and techniques used by the artisans demonstrate a continuity of the processes used by their ancestors. Materials are obtained raw from mines, and the artisans process them. The techniques used to build the objects are all done by hand, whereas tools are barely used.

This research provides documentation that helps to fill an existing gap in the academic knowledge about the traditional ceramic production chains in Barichara, Colombia. The information collected can have a broader effect on the investigation of pottery practices (Arnold 1991, p. 161). It can be a valuable source to other researchers or institutions, and as such increase the attention to the existence of these kinds of practices (Yussif et al. 2018, pp. 3–10). Finally, the data collected can be used to compare the process and techniques used in Barichara with other ceramic traditions in Colombia, South America, or even globally, forming a repository to preserve the knowledge of a tradition that is in danger of being lost.

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Tell us a bit about yourself, your abilities and why you are interested in contributing, via e-mail with the subject line 'Editorial Team EOI' to: scrollpublication@gmail.com

editorial policy

Scroll was established as an avenue for students to write outside of the context and pressures of assignments. The editors work directly with contributors to provide feedback, in the spirit of open collaboration.

As such, submissions to *Scroll* do not undergo a formal double-blind peer-review process. By removing this requirement, we hope to encourage students of all abilities to participate. However, all articles are reviewed based on an editorial framework, the gist of which includes the following:

CONTENT QUALITY
- Is the content relevant to conservation or cultural materials?
- Does the writing present a clear argument and aim?
- Is the work engaging to a knowledgeable but casual audience?
- Are the author's claims verifiable?

REUSING UNIVERSITY SUBMISSIONS
- Is the submission substantially revised such that it will not create an unfair advantage for future students?
- Have comments from the assessment been incorporated?

PLAGIARISM
- Has the author understood the requirement and declared that the submission is original and contains appropriate references and attributions?

COMMUNITY STANDARDS
- Are there inflammatory discussions with the potential to cause harm?
- If the writing contains overt political or social agendas, are they adequately contextualised?
- Does the text allege or accuse any individual or institution of misconduct, or breach anyone's right to privacy?

THE LITTLE THINGS
- Spelling and grammar.
- Are figures appropriate to the text and captioned?

INDEMNITY
- Is the author prepared to accept all liabilities arising from their submission, when pertaining to issues of copyright infringement, misattribution, academic misconduct, or defamation?

We hope that the above demonstrates *Scroll*'s commitment to treating your work with care and discretion. Submissions are typically reviewed between 2–3 times prior to publication.

ON ITALICISATION

In putting together this issue of *Scroll*, the editors considered the conventions of italicising words that are not represented in Australian English dictionaries. Style guides often advise checking if a word is available in a nominated dictionary (for example *Macquarie dictionary* or *Australian Oxford dictionary*), to determine if the word is foreign. Although this method can, in some instances, aid with clarity, it can also fall short of the cross-cultural literacy that conservation and heritage professionals necessarily inhabit.

As such, we have made the editorial decision to only italicise when it is likely that not doing so will confuse the reader. Terms that may be unfamiliar to a reader will be explained with context or italicised in only the first instance. We hope that this decision respectfully allows readers to encounter and negotiate cultural diversity and encourages contributions from multilingual writers.

We will continue to follow the italicisation guidelines for scientific names and titles of art or other creative works.

Do you have any thoughts about this policy? Let us know via an e-mail, with the subject line, 'On Italicisation', at: scrollpublication@gmail.com