THE INSTITUTE OF CONSERVATION

Textiles: Conservation and Communities

Pre-prints from the Symposium organised jointly by the Textile and Ethnography Groups

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Members of Ngāti Rānana reconnect with the taonga. ©2022 Trustees of the British Museum, ©2022 Culture Perth and Kinross.

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The four posters presented at this symposium can be accessed separately.

FOREWORD

Our call for papers for this Symposium resulted in eighteen submissions, and as you can imagine it was a hard task to choose between them. The final programme of nine formal presentations and four posters is what is offered here.

These papers cover a wide range of initiatives and types of object. The individual challenges presented by each project and the research undertaken provides the opportunity to question our own practise and to debate on what is ethically appropriate and acceptable.

Our chosen theme of 'Conservation and Communities', aims to highlight the care, conservation and use of textiles that play a special part in keeping traditions alive, and to draw attention to the value of engaging with communities, in order to maintain the link between textile objects and the people, traditions, knowledge, and practices which they embody. Understanding the way something is made and its significance helps inform conservation practice.

Textiles play an important part in the values and traditions of many cultures, as well as of local groups, industries, and identities. The presentations offered by speakers from as far afield as India, Brazil and Alaska, as well as those closer to home, allow us to appreciate the global intersection of conservation and community in as broad a way as possible, whilst learning about ways of facilitating and improving access.

A big thankyou to everyone who has contributed to the 2024 Symposium. We were delighted to welcome delegates from around the world, both in person and online. We extend a special thankyou to all our speakers, and to Anna Peck ACR for all her work, having been seconded onto the committee to liaise with authors and gather together papers, and to all those who have supported the event, one that allows networking and fruitful discussion.

From the Icon Textile Group Committee

Threads through time and space: textile networks and other patterns connecting then & now

This paper is presented in three parts and individual authors are listed under each section.

Introduction

This paper records work and research undertaken as a result of the larger, £27million development project to create a new Perth Museum for Perth and Kinross in Perthshire, Scotland, and aims to disseminate some of the thinking behind that project's interpretation and conservation programmes. It explores elements of the project, built principally around the collections of archaeology, social history and world cultures gathered since the late 18th century, items that are materially and socially related, but separated by the definitions of types of collection. The new Perth Museum is set to open in the Spring of 2024.

The Perth collections have significant textile elements, and this interlinked series of papers was prompted by their shared journeys of interpretation and conservation, and by their shared social significance in their communities of origin to their descendant communities today. Broadly speaking there are three areas of textile work we will focus on:

1. Items for the North-West Coast collections, notably the Salish-woven colour blanket, part of a small group of such blankets, with its own unique pattern.
2. Items from the medieval archaeology collections excavated in Perth over several decades and including rare medieval silks.
3. Items from the Pacific Collections, specifically the world's only known surviving example of a *Kahu kākāpō* (Māori kākāpō feather cloak) and one of the few surviving *Heva Tūpāpā'u* (Tahitian mourner's costumes).

In Part 1 Mark Hall will set the scene for the overall project and then discuss the Salish-blanket and the medieval Perth case studies. Mark will sum up with some areas of overlap and wider understanding around partnerships, colonialism, co-curation, interpretation through conservation and the value of making.

In Part 2 Nicole Rode discusses the collaborative effort that enabled the care and conservation of *Kahu kākāpō*, a Māori feather cloak made of endangered kākāpō bird feathers. The project was set up as a UK Partnership between Culture Perth & Kinross, the British Museum, and Te Papa Tongarewa Museum of New Zealand. A team of conservators carried out the treatment for the ground weave of *muka* (New Zealand flax fibre), kākāpō feathers, and *pōkinikini* (harakeke strands), as well as creating supportive mounts for storage and re-display. The treatment was conducted in consultation and with guidance from the Māori curatorial advisor, Awhina Tamarapa. Holistic care was provided by the *Ngāti Rānana* through three moving ceremonies that accompanied the cloak along its journey between Perth and London. The project was also able to contribute to a kākāpō conservation DNA research project at Te Papa.

In Part 3 Anna Zwagerman discusses working in conjunction with the *Heva Tūpāpa'u* research project on the conservation of Perth's *Heva*. This costume was last conserved in the

1990s, using information available at that time, and as well as preserving the Heva a well-engineered, though rather two-dimensional display, was created. Thanks to the research project carried out by Dr Pauline Reynolds and Dr Julie Adams, new insights have shaped our understanding of Perth's Heva. Researcher, maker, and Norfolk Islander of Tahitian descent, Tahitian descendant Pauline Reynolds, who has created new barkcloth elements to add to Perth's Heva, including a tiputa, belt, and head cape based on the one at the British Museum. These new elements will be combined with the original elements of the *Heva*, allowing us to show the costume on a mannequin in 3D, and thus bringing it alive for visitors to the new Perth Museum.

Part 1: Making textiles, making meanings: from medieval Perth to the colonial pacific

Dr Mark A Hall
Collections Officer, Culture Perth & Kinross
Dr Anna Zwagerman ACR
Conservation Officer, Culture Perth & Kinross

Museum collecting goes back to the late 18th century in Perth, with the creation of the Literary & Antiquarian Society of Perth[i]. They created the first purpose-built museum in the 1820s, a rotunda building still in use today. Alongside the rotunda stands the 1930s extension that has been the Museum & Art Gallery up until 2024 when the function was split across two buildings: art gallery in the former building and a new museum created within the historic City Hall. The City Hall was built in the early 20th century to replace the late Georgian version which the Literary & Antiquarian Society had also used for exhibitions, making the new museum a sort of homecoming. The new museum tells the archaeological and historical story of Perthshire and Kinross-shire and some of its global links.

This paper was written during the four month period before the completion of installation works, which saw the Museum open to the public at Easter 2024. Conference delegates and readers can now go and see for themselves the makings shared through the conference and this published paper. The term "makings" is deliberately chosen, because one of the underlying threads of the new museum story is that of making – the human making of objects perceived as powerful, with their own attributed agency in the communities they originated within. Woven alongside this thread is the collaborations carried out with makers from across the world – leather workers, wood carvers, weavers, kayak-makers, and film-makers from the UK, Italy, the Pacific, the North-West Coast of America and the Arctic. These collaborations were driven by the need to both create accessible interpretation in the museum space and its digital extension, and by the need to begin to tackle the colonial inheritance left to us by previous iterations of the museum service, notably the Literary and Antiquarian Society, which was particularly active in the first half of the 19th century.

Colonial Legacy

Two of the Literary & Antiquarian Society of Perth's donor-collectors - Colin Robertson and David Ramsay - are of critical significance: both were born in Perth, and both sought to make their fortunes under the Empire's wings[ii]. Colin Robertson headed to North America in the late 18th century, working mainly for the Hudson's Bay Company. The collection he put

together, largely in the 1820s, was donated to the Society in 1833. A decade later, from the Eastern Pacific, a collection accumulated by David Ramsay, who based himself in Australia, and including a group of Māori *taonga*, were also donated to the Society. The rapacious capitalism that underpinned the work of Empire through its entrepreneurial fortune-seekers left a legacy of objects in Perth, acquired largely through asymmetric power relations in economics, politics and religion (including gifts, exchange and plunder). Since 2005 the Museum has been on a journey of dealing with this legacy and the repatriation of two *toi moko* to New Zealand, through the agency of Te Papa. This important first step was the foundation of the desire, through the new museum project, to work collaboratively with Te Papa to curate and interpret the Māori *taonga* held in trust. This has been formalised through a Memorandum of Understanding between Te Papa and Culture Perth & Kinross (CPK), laying out a working collaboration for the new museum and for the years ahead. CPK has also begun collaborative relationships with North-West Pacific Coast Communities, though these are currently much more fluid and protean, but have enabled the in-put of maker's into interpreting the museum's North-West Coast collections, to share with visitors an understanding of indigenous meanings for these objects.

Two of the most significant and powerful objects from this North-West Coast collection are a Salish blanket (PMAG reg. no 1978.522[iii], Fig 1) and a Chilkat apron (PMAG reg. no 1978.479[iv], Fig 2). The blanket is one of the key Salish objects, demonstrating not only technical skill but artistic and cultural creativity. In recent years it has been borrowed twice for display in North America (at the Seattle Art Gallery in 2008 for *S'abadeb/The Gifts: Pacific Coast Salish Art and Artists*[v] and at the Museum of Anthropology, University of British Columbia in 2018 for *The Fabric of Our Land – Salish Weaving*).

Blanket is a term which rather belies the high-status significance of such garments, better described as robes. Like the kākāpō cloak (see below) and the other Māori items, from the perspective of the indigenous creators, this is a living entity. Chief Janice George of the Squamish has recently said of such objects[vi]: 'You should think about blankets as merged objects. They are alive because they exist in the spirit world. They are animal. They are part of the hunter; they are part of the weaver; they are part of the wearer.' This recent study identifies only five blankets known to date with certainty before 1830, including the example currently in Perth, which is also described as one of the five great, surviving, coloured weavings. Its complexity of pattern, composition and construction led to the authors labelling it the Transformative Pattern blanket[vii]. Fundamental to it is the blanket's fringe, longer than on any other complex patterned robes. The use and amount of fringe communicates economic and symbolic information about a garment. Serving no practical purpose in terms of warmth and covering, fringes permit and show-off the use of valuable materials as decoration. Fringes were the visible form of conspicuous consumption, including the weaver's and, in the case of the apron discussed below, leather workers access to an abundance of raw materials.

To quote the authors:
'Symbolically, fringes are said to represent the closeness of the human and supernatural realms. The fluid extension of the threads as the wearers move or dance creates an interface between the person and the empty spaces that surround him or her. … They also offer a visual confirmation of the belief that blankets are living objects. As the dancer sways or

turns, there is a momentary delay in the subsequent movement of the fringe, almost as if the blanket is an independent being. Among the Haida, for example, a finished blanket is presented at a feast where it is formally presented to the community and given a name. It is then danced for the first time, and through the movement of dance it is brought to life.'[viii]

Remedial conservation by Tuula Pardoe ACR of the Scottish Conservation Studio was carried out a few years ago when the blanket was lent to an exhibition organised by the University of British Columbia. Since then, CPK's collection staff have benefitted from advice from the University Museum's conservation lead, Heidi Swierenga, and from discussion with First Nations weavers who studied the blanket when it was on display. Tuula's original treatment report mentioned that conservation was carried out for horizontal or slightly angled display only, but for the new Perth Museum vertical display was proposed. CPK therefore asked Tuula to suggest further treatment for vertical display. When discussing this treatment with Heidi however, the proposed vertical display was changed to display at a 70-degree angle and, with first-hand knowledge of the blanket, further remedial treatment was therefore found not to be necessary.

A North-West Coast apron is also on display in the new museum. It originated with the Chilkat branch of the Tlingit people. It is made of fringed skin with a central panel of cedar bark and mountain goat wool, with a design of supernatural beings, the central face that of the being with whom the chief directly communicated when performing a ceremonial dance in the apron (personal communication with master-maker Willy White, correcting the misattribution of killer whale given previously[ix]). The display of the apron benefited hugely from Heidi Swierenga's and Willy White's advice, resulting in the remedial treatment being significantly reduced. Tuula Pardoe carried out one day of benchwork, instead of the original 30 hours proposed, to stabilise the worst of the unravelling fringe only. The woollen fringe was damaged by insect larvae along its woven edge. Threads were broken and leather fringe strips were lost. Many of the remaining strips were at risk of becoming detached. To treat this, strips of double thickness 20-denier nylon net were laid under the damaged woven edge of the apron. Detached weft threads were worked back in the weave structure. Loose threads were sewn to the net support with doubled monofilament polyester thread. The apron is more stable now but will still require careful handling to prevent detachment of leather fringe strips. Heidi and her colleague Shabnam Honarbakhsh also proposed a mounting method for the apron, using embedded rare earth magnets to mount the apron on an angled support board. Perth Museum hopes that it might be able to bring Willy over from Canada to make a copy of this apron and to dance it into life in future.

For the final ethnographic example we turn to a set of Iranian Ney-anban or bagpipes (PMAG reg. no. 1813, fig 3 and 4). They are made principally from goat/sheep skin along with elements of wood, fabric and metal. The conservation treatment was carried out by Lydia Messerschmidt ACR. Aside from a thick covering of dust and dirt, the bagpipes were deformed due to a historic repair and due to the deflation of the instrument, resulting in folds and creases in the leather. To store the bagpipes the mouthpiece was pressed to one side. Microcracking and delamination of the leather was visible along the strong folds. There were also signs of pest damage, such as small holes and loss of material. Paint spatters and a black, partially tacky coating obscured part of the mouthpiece and damaged the leather surface it was in contact with. To treat the bagpipes, the surface of the leather was dry and

wet cleaned, and the leather was carefully reshaped during wet cleaning when the deionised water temporarily made the leather pliable. Wet cleaning was necessary because the dirt had become ingrained in the leather, and soiling was uneven, with less dirt in the folds. Microcracks and delamination closed again during wet cleaning, and where there was a risk of material loss local consolidation was carried out with methylcellulose. Japanese paper was used with Lascaux 498 HV to support and repair cracks and holes in the leather. Finally, the black coating and paint were removed from the mouthpiece with Industrial Denatured Alcohol. The bagpipes were collected in the mid-nineteenth century by Dr Riach, one of three brothers from Perth, all sons of Empire serving in the military and the so-called Honourable East India Company. Dr Riach served the East India Company, including a short time as medical adviser to the Shah of Iran. Whilst in Iran he found time to add his graffiti to the ruins of Persepolis and collected various items which he donated to the Literary & Antiquarian Society, mainly in 1830. Had he not been Scottish he probably would not have been interested in the bagpipes, but because of his Scottishness he drew a lesson about British superiority from the pipes, which he communicated in a letter send with his donation[x].

It is worth quoting its key comments:
'Its close resemblance in form as well as in the character of the music produced from it, to the more improved instrument of the same name in Scotland forms its chief and perhaps its only point of interest, and certainly these constitute the only reasons I have for presuming to suppose that so very rude an instrument could possibly be acceptable. If however the latter conjecture is correct and provided the Society will receive the present as proof of my desire to contribute to its Museum – it will be a source of gratification to me when any other opportunity allows of enabling me to add my mite to the Antiquarian Stores with which my native City is already enriched.'

Riach then describes watching the pipemaker, who, 'displayed very great command of the powers of his rude handiwork'. He then explains the pipes are made from antelope skin and that they were used by the Persian or Turkish nomadic tribes of the mountains and the Arab tribes of the sea-coast. The pipes were used to call livestock and to celebrate marriages, feasts and funerals. He continues that the sounds elicited on first hearing are not dissimilar to those of the Scottish variant, and that such pipes are instruments of great antiquity and geographic spread. He concludes:
'The difference between the very rude instrument now offered to the Society and the imposing, handsome warlike Bagpipe of Scotland is very striking, but there seems little reason to doubt that the former is the true original of the latter, these two may well represent the present state of the inhabitants of the representative countries of Britain and Persia in which they are now found, the former free, civilised and enlightened are yet in rapid and accelerating progress towards still incalculable improvements in all that is worthy of men and immortal creatures, while among the latter the dark ignorance of the earliest ages has not only been perpetuated, but the unceasing oppressions of absolute tyrants and the benumbing influence of a false religion appear to have totally eradicated even those cheering symptoms of advancement and civilisation which shone on this and the neighbouring countries, above a thousand years ago, and still retain the millions of these beautiful regions of the earth in the most debasing and brutifying state of demoralization and disgusting slavery.'

Fig 1. 1978.522 Salish blanket ©2024 Culture Perth and Kinross.

Fig 2. 1978.479 Chilkat apron ©2024 Culture Perth and Kinross.

Fig 3. 1813 bagpipes before treatment
©2024 Culture Perth and Kinross.

Fig 4 1813 bagpipes after treatment
©2024 Culture Perth and Kinross.

Medieval Perth

To finish off this opening contribution we will shift both geography and time to take us to medieval Perth. Entrepeneurial commerce is also a label we can apply to the development of Perth as a medieval town, economically successful in the 11th century to the extent that in the 12th it was granted royal burgh status, so that, in return for privileges, the King could benefit from taxation revenues. The wealth generated was considerable and many crafts helped the town to flourish. Excavations in Perth over 50 years have revealed deep, well-preserved water-logged deposits, which help to tell the story of its medieval making. To help us bring that story to life CPK have worked with various makers, particularly in relation to some medieval items of leather and silk. It may seem like stretching a point to consider leather alongside textiles, but CPK has it on good authority (per. comm. Rosie Bolton of the Leather Conservation Centre) that certainly down to the mid-20th century leather was always considered as a textile.

The level of waterlogging in the centre of Perth is such that several fragments of luxurious silk, representing various items of clothing, have been preserved. What may have originally been the most elaborate is a piece of three fragments, excavated from Kirk Close, Perth, in the late 1970s (PMAG reg. no. 1978.58.2[xi], fig 5). At the time of excavation, it was analysed by Anne Muthesius. She identified it as 13th century Spanish work comparable to silks from royal Spanish tombs in Burgos. At the time of identification, it was the only silk of its kind excavated in Britain. She suggested it was best described as a double-face weave with a lozenge twill ground and a chevron twill pattern. The design is made up of pairs of facing birds set in horizontal rows across the silk. The birds appear before a background of interlocking diamond shapes that form an all-over lozenge pattern. Such pairs of birds and of other birds and animals are a common design motif in luxury silks spanning late antiquity to the later Middle Ages. Many survive, generally in a fragmentary condition, because of their re-use, notably as relic wrappings and purses, usually in cathedral treasuries such as Sens, France and Burgos, Spain[xii]. There are several possibilities to consider around its being in medieval Perth: was it part of a full tunic worn by someone? Perhaps more likely is that as a fragment it was given as a gift, perhaps to be stitched to a more mundane piece of woollen garment? Perhaps it was a relic wrapping or purse, brought back to Perth by a pilgrim, a soldier or a merchant in the 12th/13th century? In CPK's interpretation it has tried to convey a clearer idea of what it may have looked like and so worked with a traditional silk mill in North Italy – the *Fondazione Arte della Seta Lisio,* in Firenze, who made a short run of material for us based on the surviving design (fig 6). It's conservation treatment, by Pieta Greaves ACR, focusses on re-mounting the silk to enable it to cope with the stress of vertical display.

The material on display is not only archaeological. There are items that have survived through being passed on. Something of a classic example is the Perth Glover's dance dress. This was one of several performance costumes used by the Glover Craft Incorporation when parading through the town and enacting their sword dance, from medieval times onwards. The surviving example (PMAG reg. no. 1944.10E-I, Fig 7) was in part used in 1633 to mark a royal visit to the town, when the dance was performed on a wooden platform on the river Tay. The full ensemble deploys silk, fustian cotton, leather, wood and metal, and was fully conserved in the early 1980s by Helen Bennett (1985). At that time the costume was

completely deconstructed and reconstructed, focussing on the 17th century elements by, for example, reinstating the original hemline. The hemline had been taken up over time, as the silk was damaged, but was now let back down, embedding it in netting carefully dyed to match the silk. This time around the costume required less attention. A placket for mounting the dress on a mannequin was inserted by Tuula Pardoe ACR (the Scottish Conservation Studio), and Perth Museum conservation intern Camille LaFrance, from the Glasgow University textile conservation course, repacked the bells and worked on the tights of the costume to prevent two holes from unravelling further. The two small holes on the sole of the foot were stabilised with a red Gutterman® polyester thread passed through the unravelled loops of the knit. The holes are still apparent but will no longer unravel when the hose is handled and slightly stretched to mount onto the mannequin. CPK have also commissioned a replica of the costume made by the Ironbridge Gorge Museums Trust so it can rotate with the original, protecting the fragile silk from cumulative light exposure. Light exposure will be measured inside the case through the environmental monitoring system.

Moving from leather as a dress material to leather as a furnishing, the Perth collections include a silver-gilt, painted, small, incomplete, rectangular leather panel (PMAG reg. no. 1269, fig 8). Originally it was an element of a room's wall covering at Huntingtower Castle, on the western edge of Perth. The castle was the property of the long-standing Earls of Ruthven. The panel dates to the late 16th century, a time when the earls were also the Earls of Gowrie, and owned a huge mansion overlooking the Tay, in Perth. Such leather 'wall-paper' would probably have been used to furnish the rooms there, as well as at Huntingtower. This piece is all that survives of the Huntingtower scheme and was donated to the Literary & Antiquarian Society in the early 19th century. Working with the Leather Conservation Centre in Northamptonshire, the panel was conserved. PXRF (Portable X-ray fluorescence, courtesy of Historic Environment Scotland) furnished more data about the colour palette and the silver gilt finish, informing the replica panel made for us by the Centre. The work also included the making of a pearwood pattern or former by woodcarver Tom Jennings, to impress the leather. Both former and replica panel are on display alongside the original fragment.

Staying with leather a moment, amongst the range of 9th century objects from the Pictish hillfort of Dundurn, Perthshire, at the eastern end of Loch Earn, near Strathfillan, is a leather shoe excavated by Leslie Alcock[xiii]. Leather craftsman, Hamish Langley, who specialises in early medieval, especially Pictish leatherwork, made the example to set alongside the original shoe on loan from the Hunterian Museum, Glasgow.

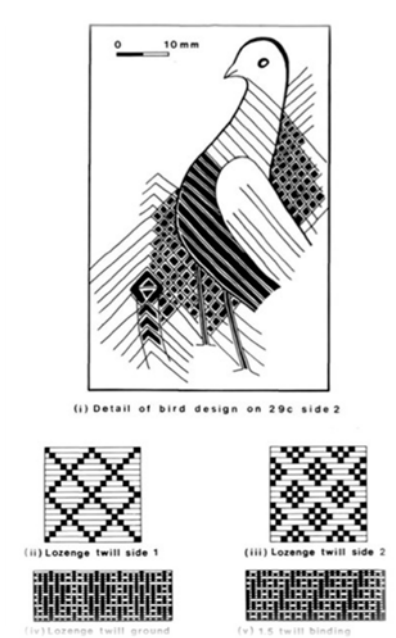

Fig 5. 1978.58.2 Silk fragment design drawing ©2024 Culture Perth and Kinross.

Fig 6 1978.58.2 Silk fragment replica weaving ©2024 Culture Perth and Kinross.

Fig 7 1944.10E.1 Glovers Dance Dress after 1980s treatment
©2024 Culture Perth and Kinross.

Fig 8 Gilt leather replica of 1269 gilt leather fragment ©2024 Culture Perth and Kinross.

Part 2 Collaborative care: conserving the kahu kākāpō, a unique Māori feather cloak

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Misa Tamura ACR
Conservation Manager, Horniman Museum and Gardens (Conservator Organics, British Museum at time of project)
Dr Awhina Tamarapa
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Dr Anna Zwagerman ACR
Conservation Officer, Culture Perth & Kinross

The kahu kākāpō is an important Māori cloak currently in the collection of the Perth Museum and Art Gallery (PMAG). The cloak is fully covered with the feathers of the flightless kākāpō bird, making this *taonga* (highly valued cultural heritage) the only known cloak of this kind in the world (fig 9). Donated in 1842 by David Ramsay, mentioned in the introduction, the cloak was most likely made in the early 1800s. The kahu kākāpō is an enduring symbol of prestige, ancestral authority and connection to the natural world. As an extended article is planned for publication in the near future, a brief overview of the project is given here.

The cloak is constructed from woven *muka*, the inner fibres of the *harakeke* plant, also known as *phormium tenax* or New Zealand flax. Yellow green kākāpō feathers cover the front surface, and along the bottom edge of the cloak hangs a fringe of pōkinikini*,* lengths of curled harakeke, dyed black at evenly spaced intervals.

The *kahu* (cloak) was identified as a key display for the new Perth Museum. While in remarkably good condition considering its age, the *kahu* was nevertheless vulnerable. To assist with the conservation, Culture Perth & Kinross (CPK) contacted the British Museum as its Organic Artefact Conservation studio has a wealth of experience treating these materials. To support the collaboration a UK Partnership Knowledge Share project was set up. This programme promotes the sharing of skills between UK-based museum staff, and allowed PMAG's Conservation Officer, Anna Zwagerman, to spend three weeks in London to treat the cloak alongside British Museum conservators Misa Tamura and Nicole Rode.

In addition to skills sharing, a key requirement of the project was to ensure that Māori perspectives and tikanga, culturally appropriate care and protocols, were part of the conservation process. To support this aim through CPK's Memorandum of Understanding with the Museum of New Zealand Te Papa Tongarewa (Te Papa), Dr Awhina Tamarapa, Teaching Fellow, Museum and Heritage Studies, Victoria University of Wellington and former Curator Māori, Te Papa, became the Māori curatorial adviser on the team. The team then liaised with members of Ngāti Rānana London Māori Club and the New Zealand Society Scotland, the UK-based groups who would perform the protocols. Discussions included what *tikanga* was required and, for the non-Māori team members, what it would consist of.

As well as clarifying *tikanga*, starting conversations early in the project also allowed exploration and agreement of additional activities that would support wider Māori stakeholders in reconnecting with the cloak, such as the creation of a Facebook Group, the

production of a short film about the project and social media posts. The group had also wanted to host an in-person study day, but this didn't prove possible due to Covid restrictions.

The cultural care required for the *kahu* was observed through three ceremonies: a Leaving, Welcome and Farewell ceremony (Fig 10). They were held at Perth Art Gallery and the BM respectively, and led by UK-based Māori representatives, some of whom were weavers. They included reciting *karakia* (prayers), singing, and spending time with the cloak, and were powerful and moving for all involved. Ngāti Rānana and New Zealand Society Scotland Members, Esther Kerr Jessop, Ereti Mitchell and Kiwiroa Marshall, later explained the importance of the ceremonies to the non-Māori team members. Much of the discussion focussed on the importance of connecting with the *kahu* as 'one would greet a living person…and that for me is a part of Māori culture, where objects are *whanaunga*, relations, people'. Of equal importance was 'letting the *kakahu* (cloak) know that her people are here and giving her comfort, allowing her to know that she's supported'. Of particular note was hearing how meaningful it was for participants to touch the cloak, an outcome that invites museums to find ways of facilitating this powerful means of connecting with *taonga* more often. These comments and perspectives will be discussed in more depth in the forthcoming article.

Work to prepare the *kahu* for display primarily addressed the stability of the delicate feather shafts and pōkinikini, - the cylindrical, dried *harakeke* strands along the lower border of the cloak - as well as mounting the *kahu*, and will again be fully discussed in the forthcoming publication.

During conservation a closed Facebook group was set up to engage with a wider group of cultural representatives during the conservation of the *kahu*. Led by the team's Māori curatorial advisor, a range of people were invited to join including Māori weavers, cultural professionals, scholars and members of Ngāti Rānana. The three conservators treating the cloak posted daily, highlighting details of the cloak, explaining the treatments being carried out, and asking questions of the community. Members were able to comment on the existing posts as well as post themselves, resulting in lively, full discussions, highlighting related research projects and other cloaks known to contain kākāpō feathers. Although the group did not instigate changes to the treatment and mounting proposals, it widened the horizon of all those working on the project, broadened the non-Māori conservators' knowledge and understanding of the materials and culture, and made for a more inclusive project so the team were not working in isolation.

From the conservators' perspective participating in the ceremonies made the conservation process much more inclusive, meaningful and holistic. Witnessing how significant it was for descendant communities to care for the cloak was a powerful reminder how important such moments of connection with *taonga* are. The discussions from the Facebook Group underlined the importance of communicating the observations and interpretations made during the conservation process with a wider research community. The kahu kākāpō project emphasized the vital role conservation practice has in facilitating an inclusive process when caring for heritage.

Fig 9 The *kahu kākāpō*, after conservation ©2022 Trustees of the British Museum, ©2022 Culture Perth and Kinross.

Fig 10 Members of Ngāti Rānana reconnect with the taonga ©2022 Trustees of the British Museum, ©2022 Culture Perth and Kinross.

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Anne Peranteau, Manager of Collection Care Practice, and Kate Blair, Kaitiaki Taonga Conservator Textiles, Te Papa Tongarewa

Dr Julie Adams, Oceania Curator, and Roux Malherbe, Producer, British Museum

Part 3 Recreating barkcloth to bring Perth's Heva tūpāpā'u alive

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Artefacts Conservator, The Scottish Conservation Studio

Background

There are a very limited number of Tahitian mourner's costumes, sometimes called a *Heva* Tūpāpa'u, left in the world, and most are incomplete. In the Society Islands of French Polynesia, the death of a chief or person of distinction was accompanied by the performance of a ceremony organised by the family of the deceased. The Tahitian wearing the costume was usually a priest or relative and called the Chief Mourner in this ceremony.

A Heva Tūpāpa'u is made up of many layers of barkcloth, pearl shell, wood, coconut shell, turtle shell, feathers, and sennit cord. The Chief Mourner was completely concealed by the costume which was, by all accounts, impressive. The mourner's vision was limited to one small eye slit, which was usually in the right pearl shell of the facemask. The Chief Mourner held a tete (clapper) in the left hand, and a *paeho* (shark's tooth weapon) in the right, allowing the mourner to strike anyone who came within close proximity. The Chief Mourner came out at dusk and the ritual could continue for weeks or months after the death of a chief.[xiv]

Under the influence of European missionaries this tradition of mourning was suppressed, and the knowledge of how to make and wear the costumes died out. As of today, around half of the surviving Tahitian mourner's costumes are in the United Kingdom and can be associated with members of Captain James Cook's crew from his second voyage. Cook and his men were able to trade for Tahitian mourner's costumes because they brought with them red feathers from Tonga by way of exchange, on the advice of the Tahitian Hitihiti.

Perth's Heva Tūpāpa'u

Perth's Heva Tūpāpa'u came into the collection of the Perth Literary and Antiquarian Society (PLAS) in 1842. It was donated by Dr David Ramsay, who also donated the Kahu kākāpō, amongst many other collections. The *Heva* was recorded in the Pencil Registers as 'South Sea Islanders mourners dress. a) 1st piece. Pole with breastplate of shells. b) 2nd piece. Apron decorated with shells. c) 3rd piece. 2 pieces cross side wrappers. d) 4th piece. Head dress of feathers. e) 5th piece. 2 clappers. Presented by David Ramsay 1842.' The costume was on display in the upper rotunda of the Society's Marshall monument (Fig 11).

The PLAS collection was only accessioned in the late 1970s, at which point c) was associated with a piece of barkcloth now thought to be unrelated to the *Heva*, and d) was associated

with a different feather headdress. Other pearl shell objects were also misnumbered as e) the clappers at that point.

Some of this information was rectified in Perth Museum & Art Gallery's Ethnographic catalogue, which thoroughly researched and described Perth's world cultures collections.

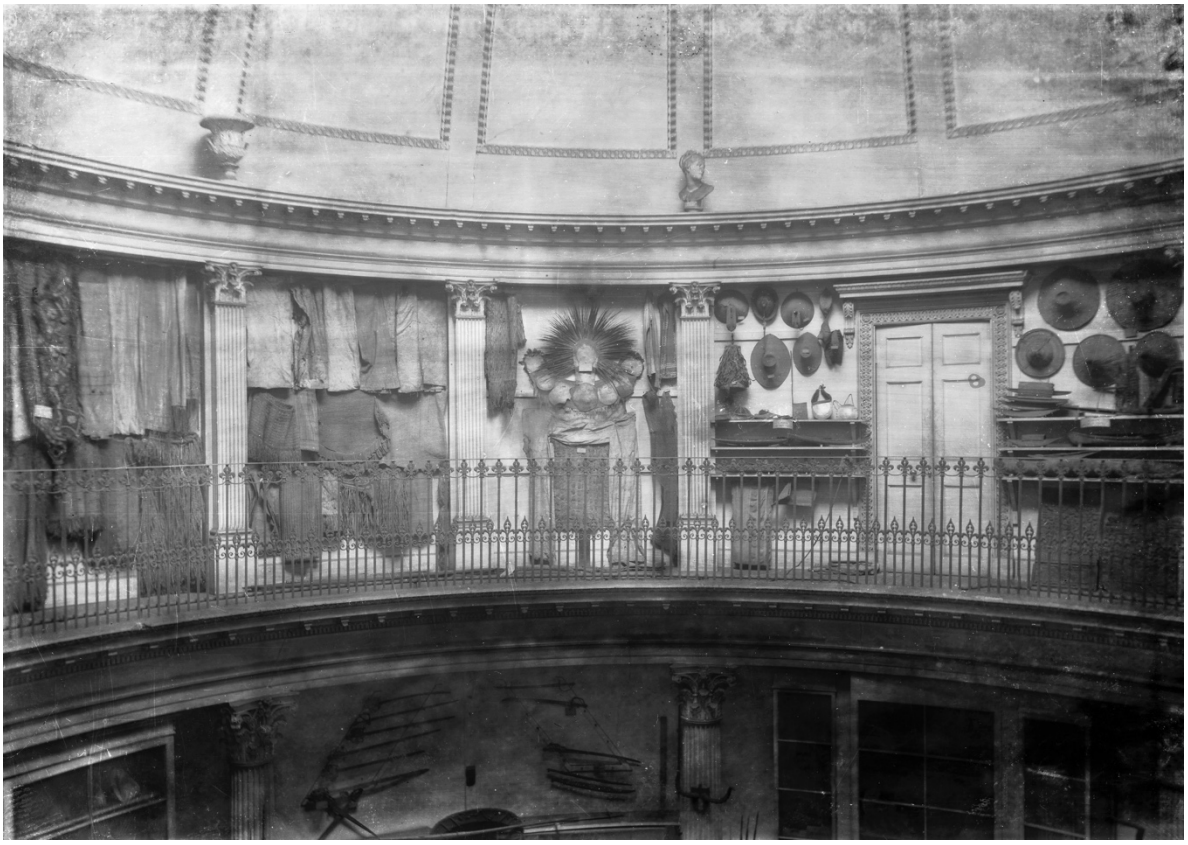

Fig 11 Heva on display in the Marshall monument ©2024 Culture Perth and Kinross.

1989-1990 treatment

By the late 1980s Perth's *Heva* did not have any remaining barkcloth, aside from the coconut shell apron. Other elements that survived were the headdress with feathers, pearl shells, and turtle shell; the breastplate with attached pearl shells on a wooden mount; and a few loose pearl shells.

In 1989-1990 the *Heva* was conserved at the labs of the National Museums of Scotland, where the Scottish Museum Council's conservation team was based, commissioned by Perth Museum and Art Gallery for its new "Time of Our Lives" gallery. Will Murray of the Scottish Museum Council's Antiquities Conservation Service was given this daunting task. Under the guidance of Perth's Social History Curator, Susan Payne, he carried out research into what was known about Tahitian Mourner's Costumes, obtaining information about the British Museum's 1960s treatment and corresponding with the Bishop Museum in Honolulu. It was however difficult to use the information in any helpful way to aid conservation and redisplay. It did prove that the neck ornament shell, numbered as a clapper in the 1970s, was not part of the costume, and the face mask shell was definitely part of the mask, but its companion

was missing. Will furthermore investigated various treatment options for the different materials that formed part of the *Heva*. The team also looked back through the museum records and the Ethnographic catalogue before deciding on a treatment and mounting strategy.

During treatment all shells were cleaned with deionised water using swabs and a rubbing action that removed the oxidised layer caused by museum pollution. The feathers were washed three times in 1,1,1-trichloroethane (also known as methyl chloroform and chlorothene), after which the loss of small feather material outweighed the benefit of washing. The wooden stand was removed, the coconut shell apron was humidified and reshaped, sewn onto a calico background, and attached to an acid-free mount board. The facemask shell was returned to the costume, and a replica pearl shell, found in an antique shop for £5, was made into the required companion shell by the Edinburgh-based sculptor Sian Lovell. A Perspex mount was created for the headdress, facemask, and breastplate, supported by a metal tripod stand. The stand was draped with a piece of calico, and the coconut shell apron positioned in front (Fig 12). The costume has been on temporary display a few times since, most recently in the 2018-2019 'Pantheon: Gods, spirits and sacred objects' exhibition.

Fig 12 Heva after 1990s conservation treatment

Research visits

At the tail end of the Pantheon exhibition Monique Pullan ACR and Sophie Rowe ACR of the British Museum visited Perth to assess the condition of the Kahu kākāpō. They were very interested in Perth's *Heva*, due to the recent completion of the conservation of the British Museum's *Heva*. During their visit and subsequent discussions, the Perth collections team noticed discrepancies between the accession register's descriptions and the current mounting. There was a plan to display the Heva in the new Perth Museum, but it was clear that the mount was now out of date, and that the costume required further attention.

Will Murray ACR of the Scottish Conservation Studio was once more asked to assess the *Heva*, and found it to be in a fair condition, although he suggested replacing all the nylon monofilament holding the shells to the Perspex mount. An initial treatment proposal was formed that would also potentially remove misplaced shells, adjust the Perspex mount, and remove and or insert shells where required. The proposal was kept deliberately vague, awaiting additional research.

In September 2022 Dr Julie Adams of the British Museum and Dr Pauline Reynolds, a Norfolk Islander of Pitcairn and Tahitian descent and a barkcloth researcher and maker, visited Perth Museum to look at Perth's *Heva* and incorporate it into their international *Heva Tūpāpa'u* research project. Julie and Pauline were surprised by the size of the breastplate and headdress, stating that it was the largest they had seen. There were five shells attached to the Perth breastplate, but on other known surviving breastplates there are only three. Pauline discovered that both pieces of the clapper were attached to the breastplate and suggested the removal of the shells from the mount to explore this further. She also offered to make a replica tiputa (barkcloth poncho) for Perth's Heva based on the British Museum's tiputa, and a barkcloth extension for the coconut shell apron, so the Heva could be displayed in 3D on a mannequin. This idea was quickly taken up, and Pauline was commissioned to make barkcloth replicas to compliment the remaining *Heva* elements.

2023-2024 treatment

When the shells were removed from the breastplate it was discovered that the larger clapper shell had 'clapper' written on it in pencil, supporting Pauline's conclusions. The original facemask shell, at one point thought to be one half of the clapper, was detached from the replica facemask shell during the dismantling. Neither the original nor the replica facemask shell had a hole in it to see through, and it was therefore decided to make an eye slit hole in the replica shell. The conservation of the British Museum and Pitt Rivers Museum Tahitian mourner's costumes were looked at in detail, as well as Tahitian mourner's costumes in other collections and their mounting techniques, to inform the treatment of Perth's *Heva*.

H&H Sculptors were engaged to make the mannequin to support the costume. Crucial to the project was commissioning Pauline Reynolds to create replicas of some of the missing barkcloth elements. Pauline was commissioned to create a new barkcloth tiputa based on the one in the collection of the British Museum, and an extension to the existing coconut shell apron so that it can be worn. After an online meeting with Monique Pullan ACR from the British Museum and all parties involved in the treatment, mounting and replica making (CPK staff, Will Murray, H&H Sculptors, and Pauline), it was decided that adding a barkcloth head cape and a rope belt to the replicas would ensure that the mannequin was completely covered, whilst creating a lifelike display (Fig 13 and 14). The replication of barkcloth components proved difficult due to distance (Pauline created the replicas from Norfolk Island, Australia, without access to the mannequin, while the Perth team were obliged to wait for the replicas to arrive by freight). Fortunately, access to the detailed notes and measurements of each component made by the British Museum's conservation, scientific and curatorial teams, meant the replicas could be created and once delivered, could be adapted to the display.

Pauline described the process of making the replicas as follows: ‘I live in a small island community where you have some sort of relationship with most people. We recently experienced the passing of three people in our community, all at different times. I was making the replicas while thinking of how the Heva Tūpāpa'u was originally made all that time ago in Tahiti at the passing of an important person in the community. It really is an act of love - for the person who passed - but also for their family and the community as a whole. A whole lot of thought and feeling going into each element. So, I'm glad to have completed these at this time. It's been a gift to work on these, despite the distance from the project.’

At the time of writing this article, the treatment of the *Heva* is incomplete. The results, including incorporation of replicas and 3D mounting, will be shared during the Spring Symposium.

Threads through time and space: Conclusion

To summarise across the three elements of this contribution, tying all that we have heard together, we would simply say that as part of the new Perth Museum project, curatorial, archaeological, conservation, replication and making practices were used to deepen the understanding of the collections, to share that with visitors and to embark upon long term collaborations with indigenous or First Peoples descendant communities today. Come and see Perth Museum and decide for yourselves.

Fig 13 Headdress replica Heva

Fig 14 Replica belt Heva

Authors:

Dr Julie Adams is Senior Curator for the Oceania Collections at the British Museum. Prior to joining the British Museum in 2015, she worked at the Museum of Archaeology and Anthropology, Cambridge, and at National Museums Scotland. Her research interests and curatorial practice are focused on connecting Pacific communities with the collections in London. Her book Museum, Magic, Memory was published by Sidestone Press in 2021.

Dr Mark Hall MCIfA, FSA, FSAScot is currently Collections Officer for Culture Perth & Kinross. His main focus has been contributing to the completion of the £27 million redevelopment project of the new Perth Museum, which opened its doors on 30th March this year. This world-class cultural and heritage attraction highlights the fascinating objects and stories that put Perth and Kinross at the centre of Scotland's story. Mark is a member of the Scottish Finds Allocation Panel and is also a long-standing member of Scotland's Archaeology Strategy, having interests in various aspects of medieval archaeology on which he has published internationally.

Will Murray ACR is an artefacts and objects conservator with over 30 years experience. In 1992 he completed a Postgraduate Diploma in Archaeological Conservation at the University of Durham, with one year placements at the Museum of London and Wiltshire County Museums Service. He spent 15 years as the Artefacts Conservator for the Scottish Museums Council. In 2005 he co-founded the Scottish Conservation Studio, providing conservation and collections care services to a wide variety of clients.

Dr Pauline Reynolds is Collections Manager at the Norfolk Island Museum and in addition she is responsible for conservation management and curating the Museum's exhibitions. She is a Pacific scholar and tapa practitioner of Norfolk Island-Pitcairn-Tahitian-British heritage and is best known for her creative and scholarly work that focuses on how objects can reveal voices left out of historical narratives.

Nicole Rode ACR is an Organic Artefact Conservator at the British Museum. She gained a Master of Textile Conservation from the Textile Conservation Centre, University of Southampton, UK, in 2003, and became an accredited member of ICON in 2013. In her role at the museum she treats treasured objects from a variety of cultures and time periods and works with a wide range of stakeholders to make decisions about their care.

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Ereti Mitchell, New Zealand Society Scotland
Amy Thornton, Freelance Model Maker/ Prosthetic Make Up Artist/ Facial Reconstruction
Willy White, Chilkat Master-Maker

[i] Anon. 1827; Anon. 1881; Allan 2003.
[ii] For their potted biographies see Idiens 1981, V and VI
[iii] Idiens 1981, 45, cat. 706
[iv] Idiens 1981, 45, cat. no 703
[v] Brotherton 2008
[vi] Quoted in Tepper, George & Joseph 2017, xiii
[vii] Tepper at al 2017, 107-108
[viii] Tepper et al 2017, 112
[ix] Idiens 1981, 45, cat. 703
[x] PMAG archive 1830
[xi] Bennett 1987, 169, cat. 29
[xii] Chartaire 1931, Luaces 2005, Kagan & Sire 2018
[xiii] Alcock et al 1989, 195; Hunterian Museum reg. no. GLAHM:138399
[xiv] Heva Tūpāpā'u (Mourning costume) | Collections Online - Museum of New Zealand Te Papa Tongarewa (last viewed 29.01.24)
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Safeguarding Textile Tradition: Learning from Community People

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Abstract

Museums contain a number of textiles from various communities belonging to different time periods. Sometimes the process of making is not known and only guessed at, depending on the region or the techniques used and studied through the help of modern scientific tools. However, for the existing textile practices prevalent among the communities of the region, we can document the process of making or the way community people use a particular loom for production. It can help future researchers. It also connects the communities to the museums and the context of the textile collection will be preserved in this way. This was indeed used as a method in our small museum of ethnography. As part of this initiative, Karbi community people from Karbi Anglong district of Assam were invited to install the traditional loin loom of their community in our museum, and the whole process recorded with their consent. This seems to have been a positive incident for the community. This paper tries to discuss our experiences of working with the communities in relation to textiles in our museum collection.

In a time when traditional practitioners feel a bit alienated, due to the coming of modern technologies, this connection seems to empower them and they take pride in the traditional knowledge they possess. The new generation also show an interest in learning from their elders. These renewed interests can be helpful in safeguarding these intangible cultural heritage practices related to textile traditions of the communities.

Background

Assam, situated in the northeast corner of the Indian sub-continent, is the home of more than two hundred ethnic communities, each having unique textile traditions. Rich natural resources of the region provide the required raw materials, themes and motifs of ornamentation. There is existence of different types of looms among the different ethnic communities of the region. Various textile motifs, natural dyes, different weaving skills (techniques) together with numerous oral-lores make it an inevitable part of the cultural heritage of the region. Weaving has been a way of life of the ethnic communities living in Assam since time immemorial. The specific name for each motif and each type of weaving style in the dialects of the ethnic communities confirms that these are traditionally present in these societies. It is a matter of immense satisfaction that most of the communities of the

region still have a living textile tradition and other elements of Intangible Cultural Heritage. Thus, documentation and study of this living tradition is still possible.

ICH and Museums

The indigenous/ethnic communities of Assam have been continuously safeguarding their indigenous knowledge systems through their unique customs, rigid rules and rituals which were followed by the people of the community over the years. However, with changing socio-economic dynamics, the indigenous system of safeguarding this heritage is being disturbed. Communities struggle to find balance between the traditional knowledge they hold and the new western education system that is almost unavoidable if one wants to appropriate their existence in this modern world. In this process, the indigenous knowledge system gets a backstage as its use and importance is not realised and understood by the communities. The practical and time-tested methods of resilience and self-sustenance is thus slowly given less importance. The younger members of the community are constantly trying to catch up with the modern education systems and lifestyle which is, at times, completely in opposition to the traditional way of life. Thus, the younger generation is being alienated from their cultural roots, forgetting the vast array of knowledge embedded in the traditional way of life. This is further being problematised by the migration of the ethnic communities from their original territories to different regions for education and livelihood.

Thus, it becomes a herculean task to balance between the traditional intangible cultural heritage and the development goals of the communities. However, if the potential of this vast knowledge is realised and properly utilised then it can lead to sustainable development of these communities.

In this context, museums can play an important role in safeguarding the intangible cultural heritage of communities. However, the question remains as, 'what does the safeguarding of living heritage mean when all the complexities associated are considered, and how can museums contribute to this?' Museums in recent times are trying to work effectively with communities. They try to fit community engagement into their role as an auxiliary activity, after focusing on their core functions of collections care, documentation and research. Due to several developments on the academic front, as well as at policy level, museums increasingly consider the social role of museums, not in contradiction with the core museum functions but in direct relation to them. One of the important domains of museums is to work for living heritage practices related to existing collections, and interpreting the collection for the people whom the museum serves. Adding "living heritage" to the definition of a museum seems to add dynamic effect to both. By reconnecting museums with local practitioners and revitalizing some elements of the collection, museums can effectively play a positive role. ICOM's Shanghai Charter recommended museums as facilitators of constructive partnership in the safeguarding of the heritage of humanity. Thus, museums are exploring, and will need to continue discovering, innovative strategies in their practices to support society and to meet today's extraordinary challenges. As museums are at the junction between tradition, innovation, and communities, they have a role to play in fostering sustainable futures and wellbeing. Although there are various recommendations and suggested areas for work, there is yet to be any recommended methodologies and procedural framework for the same. Thus, there have been alot of trial-and-error methods.

The Case Study: Museum at Tezpur University, India

The Museum at the Department of Cultural Studies, Tezpur University, Assam, India is a small ethnographic museum dedicated to the cultural expressions of North-East India. The museum collection tries to showcase the tangible forms of cultural expressions of the region. At the same time, we involve communities in curation and research of our collection and try to work together. We attempt to give space to the people and cultures that led to the creation of the objects in our collection, the meanings they have for the community people and the role they play in their lives.

This project in our museum is the result of our constant questioning and experimentation on 'how can museums make sure that their collection policies value the intangible elements that are not necessarily part of their material collections, but remain outside of their walls as embedded within the diverse communities they serve?' The method we adopted in this project was to connect with the community people for the installation and exhibition preparation. We invited two traditional weavers from the Karbi community of Karbi-Anglong district of Assam, India to install the Karbi loom recently acquired by the museum directly from the community.

We contacted a local person from the village who has knowledge of the community people so that we could invite one or two good weavers to set up a Karbi loom. Two female weavers came for this purpose —one knowing only the Karbi language (which unfortunately we, in the museum, do not understand), and the other with whom we could communicate in Assamese language to act as a mediator. During the project, these two indigenous weavers from Karbi community came from the village with all the local materials required to set up the loom. These raw materials included a special variety of wood and bamboo. They brought the parts to be used in the loom in their exact shape and size. In the villages, these types of looms are set up at a convenient place with open space, generally in the courtyard or by the side of the foyer of the traditional Karbi house. "Tomal" – a kind of string prepared from bamboo, is used for tying the topmost bamboo pipe of the loom structure in place. However, in our project jute thread/string is being used for the same purpose as a replacement, due to its simplicity and availability. To first set up the weaving loom, two varieties of threads are also used, along with some strings made of jute.

The looms used by this community are back strap looms and are portable and thus easy to set up. They therefore require less space than other types of looms. The working of the loom is simple but can accommodate different weaving types used by the community. However, each step has to be very precise to achieve a proper installation of the loom. The two weavers coming to install the loom were experts in the process. Although there were lots of situations when they needed to adapt to a different work style or environment, they were okay with the changing demand of the work. The primary objective of this part of the project was to get the final product i.e the setting up of the loom, completed. They achieved this task in a single day and the loom was ready to be used for weaving. During the whole period the weavers were working in a designated area in the exhibition space of the museum which was in open view for the visitors (Fig 1). This arrangement did not hamper the working of the weavers and they seemed to enjoy the interaction with visitors. The visitors also seemed to be happy to be able to view the process of installation of the weaving loom during their visit to the museum. While the visitors were able to get the feel of a

community life in the museum environment itself, the weavers on the other hand got to know the worth of the so called “mundane” activity they have been practising. They could feel that they possessed some special knowledge, which was of interest for the other people visiting the museum or the people working in the museum and the university. This feeling is very much empowering. They felt, “they have some special knowledge which is not possessed by everybody”.

During the stay of the community weavers in the museum we exchanged thoughts on the importance of their knowledge about the making of the loom and the textile weaving in the context of preserving this craft. The uniqueness of the weaves, which are prepared on the back-strapped loom and the intricacies of some of the designs, were not previously known to the weavers. It was just an ordinary act for them. The realisation of the fact that the know how about their daily life, or “usual activity”, of textile making, which they consider to be very ordinary, can be an object of interest for people from the University or a Museum, which are generally regarded as the instruments of modern education, is an empowering thought for them. This act initiated in them a feeling of self-esteem and renewed interest for the traditional knowledge they possess. When they went back to their village and showed what they did in the museum, and shared the response of the museum professionals and audience it was a new realisation for the whole community. Specifically, the younger generation seem to have a new insight on the importance of traditional knowledge that the community possesses. The weavers assured us they would themselves have an awareness activity among other weavers of their locality. They considered it their duty to transmit their knowledge to the next generation and keep the knowledge flowing seamlessly.

With the permission of the weavers, we documented the process of installation of the loom and setting the loom up ready for weaving. During the process of arranging the threads in the loom it was clear that it can be used for making all the traditional types of textile pieces prepared by the Karbi community. However, for different types of textiles, the threads are arranged in the loom differently, depending on the length and breadth of the textiles to be produced. The loom is arranged, or can be modified, depending on the desired weave structure to be produced.

We have a few Karbi textile objects in our collection which were produced on the traditional loom of the Karbis following the traditional weaving method and using traditional designs and motifs. In some cases, these motifs and designs are associated with some specific beliefs. However, the context and the intangible cultural heritage associated with these textile objects were not showcased in the museum before. Thus, the audience has a chance only to see or know the object, but mostly remains unaware about the stories behind its creation, or the importance of the object in the lives of the community people. To connect the intangible heritage associated with the textile objects we installed a video for the audience to know and relate to the process of making of the object on display.

It is important to mention here that almost all the ethnic communities of Assam have some unique textile patterns and motifs, distinguishable from the textiles of other communities. The Karbis use the back strap loom and for bigger textiles they join the pieces by hand using a particular stitch. We have this background knowledge from the secondary sources and

from the visit to the Karbi village and interaction with the community weavers there-in. However, we did not know about the weaving techniques or of the weaving process.

Knowledge of the technique of production is essential for restoration and conservation of the textiles in the collection. The time and effort on scientific investigation to know the raw materials, and techniques of production, can be minimized with this engagement with the local communities. In most cases, these are essential for narrowing the probable methods and materials involved in production.

Conclusion

It is understood that awareness among the community in the form of active understanding is the best way towards safeguarding ICH. The community people are very enthusiastic about the fact that their "ordinary" act of weaving is an interest for the museum people. What they were considering as being their usual and ordinary activity is not known about by a lot of "educated" people. That active guardians are being utilized as experts on their own collection is, in fact, a desired goal for safeguarding heritage. The project we undertook also tries to locate museums as an institution, not separate from communities, but a space through which communities can reaffirm their identity and be reassured of the safeguarding of their heritage.

At the same time, museums can also utilize community knowledge for advancing the rese arch on some specific technical preservation procedures. Systematic and careful study a nd documentation of the existing traditional knowledge of the community makes best use of the utilization of resources.

Author:

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Top, Fig 1 The indigenous weavers starting the installation of the back-strap loom in the museum space.

Middle, Fig 2 The weavers trying to adapt to the new situation while installing the Karbi backstrap loom.

Bottom, Fig 3 A Close-up of the loom during installation.

Top, Fig 4 The community weaver weaving on the indigenous back-strap loom in the museum at Tezpur University, Assam.

Middle, Fig 5 A Close-up of the weaving process.

Bottom, Fig 6 The loom can be wrapped easily and is portable in nature to enable it to be set up in a new location once it is installed.

Textile Conservation and Community Resilience: Case Study of the Kenjakura Weaving Tradition in Bankura District of West Bengal, India

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Abstract

Kenjakura, in the Bankura District of West Bengal in India, is the abode to over 300 weavers' families, who are carrying forward the weaving legacy of their ancestors. Vibrant colours, woven into beautiful patterns of checks, lines, repeats and floats are signature marks of Kenjakura weaves. The Department of Micro, Small, Medium Enterprises and Textiles (MSME&T), Government of West Bengal and UNESCO have jointly undertaken an initiative called Rural Craft and Cultural Hubs (RCCH) dedicated to promote and safeguard traditional cultural practices. Reviving the weaving legacy of Kenjakura, safeguarding the traditional weaves and improving the socio-economic prospects of the weavers have been the significant impact of this project. Among many others, the product most commonly associated with the weaving community is the ubiquitous *gamchha*, which is woven in a number of different styles and sizes. *Gamchha* is a hand-woven towel, which now falls under the purview of mill-based production. Since Kenjakura weavers were losing their market through competition from mechanised production, the project has encouraged and trained them in diversifying their produce. While traditionally they used to weave solely to meet self-consumption needs they are now reaching out to market with innovative offerings, which is in turn boosting their market presence and performance. This paper will shed light on the ways adopted to safeguard and conserve their traditional weaving practices and the relation between textile conservation and community resilience in Kenjakura.

Introduction

Kenjakura is a weaving cluster located in Bankura district of West Bengal in India. Situated by the Darkeswar river, the village has over 20,000 residents, some of whom are weavers, some are bell metal craftsmen and the others are employed as daily labourers, often in other parts of West Bengal and India. Handloom weaving in Kenjakura is a tradition, generationally practiced for more than a century.

Fig 1: Alleys of Kenjakura

Traditionally, the alleys of the village (Fig.1), during morning and night, resonated with the rhythm of working looms, echoing from the weavers' houses. While traditionally, it was a leisurely pursuit, undertaken to meet the self-consumption needs of the village household, with time it evolved to be one of the prominent professions supporting the village economy. This implies that weaving in Kenjakura is both a passion and a profession. Among many others, the product most commonly associated with the community is the ubiquitous *gamchha*, (Fig 2) which is woven in a number of different styles and sizes. *Gamchha* is a hand-woven towel, which has been Kenjakura's signature creation since traditional times. However, with the turn of fate and advent of technology, Kenjakura handloom products faced a serious threat from mill-based mechanised production which made the process of weaving more time and cost efficient. As a result, the weavers of Kenjakura lost their market and were compelled to drift to other menial professions to meet their basic needs.

Once an endangered tradition, attempts to revive the handloom weaving tradition of Kenjakura started less than a decade back, with the development programme of the West Bengal Khadi and Village industries Board (WBKVIB) under the Department of Micro, Small, Medium Enterprises and Textiles (MSME&T), Government of West Bengal. This initiative was succeeded by the Rural Crafts and Cultural Hubs (RCCH) project, a collaborative initiative of the Department of MSME&T, Government of West Bengal and UNESCO, dedicated to promote and safeguard traditional cultural practices. This series of interventions have been catalytic in transforming the fate of the Kenjakura's weaving tradition.

At present, Kenjakura is the abode to over 300 weavers' families, who are carrying forward the weaving legacy of their ancestors. The vibrant weaves of Kenjakura tell a story of a kind. Conceived by the creative imagination of the weavers, the rhythmic shafts breathe a symphony into the natural essence of the yarns that are woven into beautiful patterns of checks, lines, repeats and floats. Reviving Kenjakura, safeguarding the traditional weaves and improving the socio-economic prospects of the weavers have been the major agenda of this project. The project has also created networking opportunities where the weavers have collaborated with designers of repute and co-created a range of diversified products. (Fig 3) Now, the product range has expanded beyond *gamchhas* to include other innovative items such as sarees, stoles, cushion covers, bedsheets, curtains and other lifestyle and apparel items.

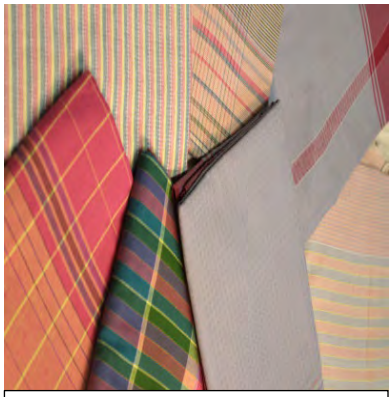

Fig 2: Gamchha

Fig 3: Diversified Products

The weaves of Kenjakura have a beautiful character and appearance. The interesting use of float structures in simple products with natural fibres of cotton and silk is what makes them distinctively different from other handloom products. The weaving practices of Kenjakura are strategically organised. The process of weaving starts with sourcing raw materials in the form of dyed yarns of different counts. Processed yarns arrive in bundles specific to the count. While thicker yarn counts of 17 and 40 are used for most home linen and utility products, 60 count yarns are used for finer weaves. The yarns are supplied to the weavers by the middlemen, who in turn source it from Bankura town, around 20kms away from the village.

The most important part of the weaving process is the methodical calculations that support the weaving intentions. The yarn is divided as per these calculations and processed accordingly. The warp yarn is first wound as per the design requirements. This yarn is then passed through the metal reed of the hand loom as per the colour sequence of the design. This reed holds the yarn in place until the loom setup is complete.

The free end of the yarn is passed through frames on the loom sequentially as per the design pattern. While the simplest weave requires two frames, complex weaves can use up to 12 - 20 frames. The frames are then tied to a pedal that the weaver operates with his/her feet while weaving. This regulates the movement of the frames up and down to allow for the bobbin shuttle to pass through as the weaving proceeds. The warp setup is completed by passing the yarns through another fixed reed on the loom. This reed is used constantly to maintain the density of the weave structures as well as keep the warp end compact. Finally the fully formed fabric is wound round a beam at the back of the loom. (Figs 4 & 5)

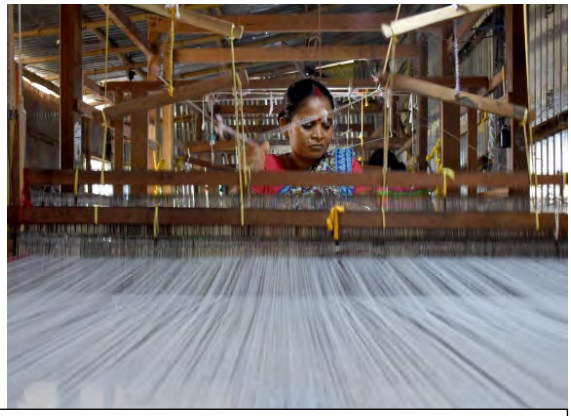

Fig 4 and 5: Loom Preparation in Kenjakura

Kenjakura weavers can operate a greater number of pedals in the weaving process which differs from other weaving communities. The methodical weaving process can be traced as the primary factor contributing to the strength and uniqueness of Kenjakura's weaves. The RCCH initiative, through capacity building and business skill development of the weavers, has trained and encouraged them to expand their ideas and create products that align well with the changing needs of today's market, while building on the strengths of the traditional weaving patterns and practices.

This paper, while highlighting the impacts of the intervention, raises serious concerns pertaining to the relationship between textile conservation and community resilience in Kenjakura. While the RCCH intervention has been catalytic in safeguarding traditional patterns and weaves, and facilitated innovative diversifications while retaining their traditional weaving process and design vocabulary, the weavers at large still have indirect exposure to market. They cater to the orders given by middlemen in lieu of production-specific wages. At this point it becomes important to question whether the sole presence of such an intervention is adequate to conserve the traditional weaving practice and attain community resilience through such safeguarding measures? How can an ecosystem be created which will be conducive to support the marriage of Kenjakura's traditional design vocabulary and modern innovations, and how can the wage-based weavers be converted into 'art-preneurs' managing their own business enterprises?

This paper, is an attempt to discuss these raised concerns, and is divided into two segments: - the first segment talks about the intervention, safeguarding initiatives undertaken and the current socio-economic status and aspirations of the weaver community. The second segment focusses on the necessary issues, which need to be considered to achieve long-term community resilience through conservation.

1. The Intervention

1.1. ***Need for the Intervention*** – The handloom sector in India plays a major role in showcasing India's cultural and aesthetic diversity with regards to the artistry of various weavers. The production by the sector, and export earnings (Textile Value Chain, 2020), make a significant contribution to the national GDP. India's handloom sector is one of the biggest unorganised sectors but is the second-largest employment provider in the rural regions, employing more than 3 million people in direct and allied activities (India Trade Portal, n.d.). According to the Handloom Census of 2019-2020, the industry employs about 3,552,512 handloom weavers across the country with 72.29% being women. Despite these advantages, the handloom sector seems to have been marginalised with increasing focus on economic liberalization and competitive markets. Other factors such as rapid and manifold increase in the price of raw materials, poor awareness of buying patterns/trends in the market, inadequate variety in designs, low grade technology and high cost of production, have all led to handlooms becoming an unviable proposition. Furthermore, the rise and rapid proliferation of powerlooms, from 1960s onward, made mill-based production time and cost efficient, thereby posing a serious threat to the handlooms.

Kenjakura's handloom production became the prey of this transformation. Their hand made *gamchhas* failed to compete with the mill-based towels, which are much cheaper with lesser production time. Mill-based production thus significantly contributed in endangering the weaving tradition of Kenjakura. Once a thriving

practice, with time, the weavers were compelled to dissociate themselves from the age-old weaving tradition and move out of the village in search of menial work. This in turn contributed in increasing vulnerable migration away from the village. The RCCH initiative was undertaken to revive Kenjakura's weaving tradition and reinstate the same as a major earning source for the people of the village. The intervention started in 2017 and within less than a decade, the activities undertaken have been catalytic in safeguarding some traditional patterns and weaves of Kenjakura. This section will shed light on the details of the intervention and its consequent impact.

1.2. Background of the Study and Methodology – Kenjakura has an official population of over 20,000, out of which 300 families, roughly 1500 people, belong to the weavers' community. Out of the total number of weavers, 50% are women. Both individual interviews and Focus Group Discussions (FGDs) have been conducted with 15 local weavers in order to understand their attachment towards their weaving tradition, their recollection of the 'glorious' past of the handloom tradition, and the impact of the project in safeguarding their weaving, and the consequent impact on their everyday realities with regard to the gaps that are yet to be addressed in order to achieve community resilience through textile conservation. The unstructured qualitative interviews have been designed to capture the experience of the weavers and analyse their experiences by keeping in mind their context. The following section will shed light on the nitty-gritties of the intervention.

1.3. Reviving the weaving tradition of Kenjakura: Initiation of a Process - Attempts to revive, rejuvenate and safeguard the weaving tradition started in 2017 with the village development initiative of WBKVIB, which was later succeeded by the RCCH initiative. The initiative was undertaken with the motive to safeguard traditional patterns and weaving processes, to improve the socio-economic prospect and visibility of the handloom tradition, and to motivate and retain the weavers into continuing that tradition. Capacity building and skill transmission sessions were organised, mostly with women weavers of Kenjakura who were trained on processing the yarns, loom preparation and the techniques needed to create traditional patterns and motifs. The training also helped the weavers to do justice to their tradition and provided the opportunity to diversify their creative offerings but still using their traditional patterns and motifs.

The weavers in the interviews stated that they produce 10-12 types of gamchhas and that these towels are in good demand both in local markets and markets elsewhere. They create a range of gamchhas with traditional designs and motifs, locally known as chera check, mukumb, honeycomb, bibi towel, phuleswari, tomtom and others. With the support of the project the weavers are now equipped to introduce newer designs, weaving patterns and colour combinations in their traditional gamchhas. This diversification has enabled their produce to cater to the demand of the high-end hospitality sector. It takes a little more than two hours to make a pair of handwoven gamchhas, which are sold at the rate of Rs 100-150 (Indian Rupees equivalent to 95p

- £1.42 sterling). While the weavers unanimously stated the demand for their gamchhas has comparatively increased in the local market, they still continue to face competition from the machine-made gamchhas, which are sold at half the rate. This implies that the shift to handloom production is a process which will not happen overnight. Building consumer awareness and triggering behavioural changes are integral in making the transition a reality.

Apart from reviving the traditional elements of Kenjakura's weaves, the intervention also enabled the weavers to come up with innovative creative offerings. The weavers collaborated with urban-based designers and co-created a range of diversified products like sarees, stoles, lifestyle items like bedsheets, cushion covers, curtains, etc. The weavers stated that these diversifications have better market performance. For instance, weaving a saree requires on average 16 hours of time and sells for approximately Rs 2000-2500 (£18.98 - £23.72 sterling) by keeping a profit margin of 20%. Although the diversifications have generated good market demand, the weavers only produce these items if, and only when, an order is placed. They believe that stock taking might not be a good idea because there is no certainty for sale. However, since the profit margin is higher and it requires more creative precision to make these diversified items, the weavers show a higher interest in making these products. The interesting part of this diversification is that the creative innovations have been triggered by retaining the heritage elements of the weaving tradition, such as the process of weaving and the use of traditional patterns and motifs.

The majority of handloom production in Kenjakura is home-centric. All the weavers have a small loom set in their modest houses, which they have got through government support. While the weavers can weave gamchhas, which are smaller in size and width, in their small looms, to make sarees and products of larger size and width, they go to the workspaces provided by the Mahajans (master weavers), which have larger looms installed. At this juncture it needs to be iterated that while the RCCH initiative can be identified as one of the noteworthy efforts undertaken to revive the weaving tradition of Kenjakura, a sole initiative can never lead to sustained impact with regard to the survival of a hand-woven tradition in today's fast market. There needs to be an economic incentive for handloom traditions to thrive. It is true that the RCCH initiative has significantly contributed in safeguarding the traditional patterns and process of weaving in Kenjakura and building the capacity of the weavers in producing both traditional and innovative items. However, the weavers do lack direct connection with market. Production setup in Kenjakura is Mahajan-based. The weavers cater to the orders given by the master weavers from whom they receive the raw materials. They are then paid at the end of order completion for their creative labour.

Given this scenario the question emerges - do the conservation of a textile tradition and community resilience go hand-in-hand in a context where the weavers' rights and agencies come with terms and conditions? What should be the optimal way

forward to marry textile conservation with community resilience? The following section is dedicated to shed light on these issues.

2. Textile Conservation and Community Resilience: A Roadmap for the Future

Weavers of Kenjakura are stuck at the level of creative labours, catering to strict orders given by the *mahajans* in lieu of minimal wage. This production setup is not only economically ineffective for the weavers but also socially derogatory. It curbs the weavers' creative freedom and disconnects them from the market. The setup also obstructs aspiration building among Kenjakura's weavers. Instead of viewing this as a local issue, we need to recognise the systemic inefficiency in this regard. Inspite of the fact that the relation between *mahajans* and weavers exudes an asymmetry of power, the mahajans remain the necessary link to the market, the only source of bread to the weavers. However, since there is no pride associated with the weaving tradition, when questioned the weavers of Kenjakura unanimously noted that their younger generation are no longer interested in pursuing this tradition. Lack of socio-economic prospect has distanced the younger generation from this traditional pursuit, and they are now taking up jobs outside the village to meet their needs. This aspiration for white collar jobs has enhanced the demand for formal and vocational education among Kenjakura's youth. Non-engagement of the youth can be identified as the prime factor marking the endangered fate of a traditional creative pursuit. Thus, in order to achieve community resilience in Kenjakura along creative lines, it is necessary to improve the socio-economic prospects of the weaving tradition, so that the same will not only lead to income enhancement but accreditation of pride, recognition and the status of 'artist' to the weavers. It is only then that the young generation will be motivated to pursue their heritage. Now, the question becomes, what is the optimal way forward?

The RCCH initiative provides an important roadmap in this regard. The initiative being a collaborative venture of the government's MSME&T department and UNESCO, safeguarding heritage through grass-root micro-entrepreneurship is the focus of the initiative. While, as we stated earlier, that a singular initiative of this approach is inadequate in achieving a sustained impact, it nonetheless provides a crucial roadmap for community resilience. A focus on enterprise building has the potential to transform the weavers of Kenjakura from being creative labourers to creative entrepreneurs, thereby equipped to drive their own process of development. Thus, the pathway to achieve community resilience through textile conservation does not go through simply supplying more looms to the weavers. It rests in recognizing the weavers as potential agents, as creative producers, capable of driving their creative ventures on terms favourable to themselves, instead of being passive receptors of welfare measures, which are often not customised to address the specific issue at hand (Hazarika and Goswami, 2018). Creation of grass-root micro enterprises in Kenjakura has enormous potential to safeguard its weaving tradition and create a sustainable impact on the weavers' community. However, isolated initiatives, even with truest intentions, will remain insufficient in creating the desired impact. For this, we need an economic system conducive to nurture the handloom sector, its demands, challenges and aspirations.

The first step to micro enterprise building rests on the support of local institutions. The strengthening of artist co-operatives and similar communities of purpose, to facilitate collaborative production, is integral to make possible grass-root creative enterprises. Secondly, facilitating financial linkage of the weavers is another crucial step to give the weavers the monetary freedom to start independent ventures. Here, the government and other public bodies can feature as guarantee funders, thereby sanctioning collateral-free loans to the weavers. Thirdly, apart from subject-specific guidance and training, such as design workshops, mentoring on development of business strategy, financial planning on a sustained basis is necessary. Fourthly, building awareness of consumers with regard to ethical purchasing, aligning buying preferences in favour of the handlooms, also accounts to being a crucial step in achieving resilience of the Kenjakura's weavers' community. Furthermore, individual capacity of weavers to cater to bulk order is limited. If a collective enterprise or institution is formed, which will take care of order management, then a sustainable system can be formed with collective participation. In this regard, there is a need to develop entrepreneurial capacities of local weavers, so that they can become equipped to manage both quality and quantity of their produce in a streamlined way. Finally, creating awareness through education will facilitate organic transmission of the tradition to the younger generation, thereby safeguarding the practice. Improved prospects of the weaving tradition can only facilitate these organic shifts. This implies that community resilience can be achieved on a sustained basis only in the presence of a conducive system facilitating socio-economic exchange through enabling purposive networking among important stakeholders. Only then will the market presence, performance and viability of traditional creative pursuits be retained, whilst maintaining ethical standards, along with recognizing the creative labours of the tradition bearers (Fig 6) on terms favourable and worthy of them (Bandopadhyay et al, 2020).

Fig 6: Weaving Legacy of Kenjakura – A Way of Life

Conclusion

By presenting the case study of the Kenjakura weaving community, we attempt to provide a roadmap for achieving community resilience through the conservation of a textile heritage. It describes at length the processes and methods associated with the weaving tradition of Kenjakura, the profile of the weavers' community, the RCCH initiative and its impact in safeguarding traditional patterns and weaves, enabling diversification through creative collaboration between designers and weavers, and building the capacity of the tradition bearers to come up with creative innovations whilst retaining the heritage elements of their weaving tradition. In doing so, this paper critically explores the inadequacy of a singular initiative, and advocates in favour of creating an economic system conducive to nurture and encourage the handloom sector. We conclude with the call for a space for positive networking between different stakeholders who, through collaboration, and not competition, will drive the success of a creative grass-root economy and facilitate community resilience through the safeguarding of traditional practices.

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From Farm to Fashion: Conserving the unique *piña* fibre through documentation and community action

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Abstract

Among the natural cloth fibres around the world, *piña* textiles stand out as unique to the Philippines, not having been produced elsewhere. The best kind is found mostly in Aklan, Panay Island, an exemplar of a geographical indicator or *terroir*, in which the soil, water, and other conditions have made the introduced red Spanish pineapple (*Ananas comosus*) grow leaves to a metre-long, enabling these plant fibres to be woven into cloth. *Piña* was said to have been invented in the late 16th century during the start of the Spanish colonisation of the Philippines. Eventually, it became part of the ensemble of the elite, and was preserved in major collecting institutions of the world. The *piña* represents the traditional knowledge systems of local weavers, connecting community-based specialised producers of *piña* fibre in Aklan with skilled embroiderers of Laguna (South Luzon). Some strategies for home-grown sustainability programs include adaptation, combining *piña* with cocoon silk or banana yarn, and transmission of knowledge and skills through schools of weaving traditions in parts of Aklan such as Kalibo and Balete while Laguna embroiderers, especially in Lumban, innovate traditional designs to include their distinctive signatures. The success of conserving fragile textiles such as *piña* does not only depend on the conservators, the right preservation conditions, and methods to keep them in collections but to make a detailed record of their makers, materials, processes, and motivations in a database. These will become reference compendia upon which future weavers and embroiderers learn to safeguard their intellectual property and intangible heritage.

Introduction

Among objects for conservation, textiles may be one of the most challenging, especially those produced from handlooms and in tropical climates. It is part of the creative field in which weavers and those who might embellish them tend to innovate, combining fibres, experimenting with tensions, density, and opacity of textiles, and dyeing them before or after weaving them. They are also produced not just by a weaver but by several people within their kin group or community, depending on the demand, as well as the desire of weavers to fulfil that demand.

As one of the most labour-intensive among crafts, handloom textiles traditionally require the extraction of fibres (Dodge, 1897) and processing them into yarn, setting them up on the loom, binding and embellishing them through weaving, and eventually turning the textiles into garments. The requisite of the entire task involves knowledge, skills, and other people besides the weaver, normally people from the same household. While a few contemporary photographs represent the weaver as a lone person to equate the clothmaker in the paradigm of an artist in Europe or North America, the production of handloom textiles is not a solitary activity. Seeing a weaver on his or her loom means it is nearing the end of cloth production from a long process, beginning with fibre extraction. Its context belongs to traditional knowledge systems of local weavers, connecting community-based specialised producers of handloom textiles.

In this paper, we are focusing on conserving the *piña* fabric as an example of a much sought after handloom textile in the Philippines, even if quite highly priced compared to mass produced fabrics. *Piña* is a sheer textile made from the fibres of the leaves of the red Spanish pineapple (*Ananas comosus L.*) that is usually embellished through weaving or embroidery. It is thought to have been invented in the 16th century as pineapples were brought by the Spanish colonisers to the Philippines from South America. Eventually, the older Red Spanish Pineapple cultivars were planted for their long leaves 'sourced for their fibre as early as 1591' (Bouquet, 2017: 241). While most of the *piña* fibres are produced in Aklan, there are presently efforts to produce them in Bicol, and Palawan Island, which is referred to as *Tepiña* (Lim in Guatlo, 2013).

There is another theory that the pineapples were brought to the Philippines through China by Jesuit missionaries in Peru (Carvalho, 2023). The Chinese then exchanged them among locals in Manila and other parts of the Philippines with whom they traded, as they had done probably with the vertical loom that eventually was refashioned according to the type of yarn. In due course, this became the *tanhaga*, the loom developed for the *piña* fibre (Fig 1), having had a long tradition of weaving abaca (*Musa textilis*), cotton (*Gossepium L.*) or silk (produced by silk moths or *Bombyx mori* Linnaeus, 1758), among other imported textiles that the locals processed and wore. As surmised by Carvalho, 'the success of these products was brought about, in part, by a combination of the native populations' textile skills, the European settlers' encouragement of the activity, and the business initiative of the many Chinese who travelled across the region (2023: 67).

As Montinola (1991), observed in her pioneering book, *Piña,* the fabric is truly unique in the Philippines, even if other countries have silk, satin, or linen. It is interesting that several scientific journals (Scientific American, 1899) attested to the same variety of pineapple fibres being processed in India (Hazarika et al., 2018; Jose et al., 2016), Thailand, China, and Taiwan (Royal Botanic Gardens, Kew, 1896), but not successfully woven as a fabric in any of those countries. Carvalho et al. (2009), wrote about an 1869 collection of 13 pineapple fabrics, plain or with dyed stripes from Calcutta in the collection of Harvard University Herbaria. They surmised that these come from very restricted areas such as Khasia Hills in Meghalaya State, citing an 1855 study. They added that 'India has a long tradition of weaving plant fibres such as cotton and jute but not pineapple fibres…' (2009: 106). Having also mentioned that pineapple

fibres were mainly turned into yarns for stringing beads into necklaces, it is further proof of the fibre's strength from breaking from the usually heavy beads of semi-precious stones, minerals, and gold in India. Akin to the Philippine embroidered *piña*, Indians seemed to have more preference for intricately embroidered cotton such as the *chikankari* found in Lucknow, Uttar Pradesh, receiving a Geographic Indicator status in 2008 (MAP Academy, 2022).

Green fabric: Piña as a sustainable textile

Along with fabrics from banana and bamboo, *piña* is one of the sustainable textiles produced in the Philippines. According to Raquel Eliserio, owner of Raquel's Piña Cloth Products based in Balete, Aklan, one of the largest suppliers of *piña* fabrics and garments in the Philippines, to complete an entire process of *piña* fibre production – from farmers down to the weavers – involves 11 or more individuals to produce one garment. They use 129 leaves if coarse fibres are used. If not, they use approximately 300-350 leaves for a pure fine *piña* fibre garment. This is their preferred level of quality, showcasing the best *piña* fabrics. As we will explain below, using natural materials contributes to lower carbon emissions and helps mitigate climate crises, while encouraging a community's economic activity.

The practice, in most places in the Philippines, that nothing must go to waste is exemplified in harnessing pineapples for *piña* fabrics. Instead of intensive farming of the plant for its fruit, which still exists in Mindanao, Southern Philippines with its Dole and Del Monte pineapple plantations that began during the U.S. colonial period, areas in Panay Island where Aklan and Iloilo are located (Fig 2), may have started with cultivation for fruit but eventually the Red Spanish variety yielded long leaves instead and very small fruit. The idea of turning the leaves into fibres is said to have been introduced by the Spanish priests in the sixteenth century with the importation and crop growing of the *Ananas comosus L.*

Piña fibre is extracted from the leaves through hand-scraping and decortication using a broken piece of crockery, separating the outer, coarse (*bastos*) and inner, fine (*linawan*) fibres. The latter is produced by using a piece of coconut shell to obtain the finer filaments. Mixing the two with a machine to prevent waste, since normally coarse fibres are discarded, is an innovation made by weavers with the help of a government agency such as the Philippine Fibre Industry Development Authority. The fibres are then washed with clean river water to degum them from pectin and then air-dried. The dried material is knotted and spun to produce long strands that would eventually be installed on the vertical loom that was designed to weave *piña* fibres, combining sufficient tension without breaking them while maintaining their translucence and fine texture.

With its natural ivory-coloured sheer fabric that looks like linen but with the texture of silk, *piña* became popular among the social and economic elite of colonial Philippines as an elegant symbol of their power (Roces, 2013; Clutario, 2023). Embellished with embroidery that takes inspiration from natural surroundings but following the ecru colour, traditional *piña* textiles resemble lace, but its process is more complex and intricate (Little, 1938; Welters, 1997; Roces, 2013). As Montinola (1991) discerned, it allowed the embroiderers to make it more ornate but

keep the aesthetic restraint. A challenging example of simulating lace on *piña* is the *calado* technique with marked drawn thread work, "in which threads are pulled out of the fabric to create openwork or drawn together to form a design" (Montinola 1991: 109).

Essentially *piña* production is a countryside activity as it uses natural elements such as water, air, and earth. Even rural towns in the Philippines suffer from contemporary challenges of pollution unfit for making these fabrics. It is one of the reasons for Raquel Eliserio's decision to establish their weaving centre in Balete, which is 22 kilometres from Kalibo, the capital of Aklan province. Besides being her hometown where her mother began weaving *piña* cloth, she found that all the resources for her to continue their family tradition are in Balete. Her son, Carlo, who is co-author of this paper, is also a weaver, dyer and designer. Their workshop is close to the farms where red Spanish pineapple cultivars are more abundant and of better quality. Moreover, the experts in separating fibres from the leaves and the knotters of the *piña* filaments are there. Women from the community, as well as men, have participated in training programs for weaving, appreciating the economic benefits even if handloom weaving is labour-intensive. In the nineteenth century, only half an inch of *piña* a day was produced. Today, with some innovations they can weave a meter long (Boquet, 2017: 241).

The Biography of Piña: Ethnography as a tool for Conservation

Hoskins (2006) describes objects, especially cloth, as articles of inquiry that can be analysed, 'as commodities as well as artistic Inventiveness' (p. 81). In the case of *piña*, its lack of codified history and fuzzy invention attribution may be significant on many levels. One of them may point to the collective development of the fabric among weavers that is not led by market or consumer demands. Another is a strategy devised by the *piña's* producers to protect their knowledge and intellectual property through its labour-intensive production. For instance, the scraping of leaves to obtain fibres has no detailed procedures. Expertise is developed through apprenticeship and years of practice, making it truly an intangible heritage. Conservators need to be aware of the intentional lack of formula in the production of *piña* and are contingent upon referring to visits, observations, and interviews of individual weavers and their sources.

The present centre of *piña* weaving activity is in Aklan on Panay Island, although in the nineteenth century the centre was in nearby Iloilo province. They not only wove *piña*, which they called *sinamay*, but also cotton and silk (Funtecha, 1998). Areas of Iloilo such as Jaro, Molo, and Arevalo developed urban concentrations as demand for handwoven textiles from Manila, different parts of Luzon and the world, increased. As Funtecha noted, these were, 'managed by an urban commercial elite of mestizos, mostly of mixed Filipino Chinese parentage, a big number of women weavers crowded into small factories (Figure 3) located in the town of Iloilo and its suburbs' (1998: 81). (Fig 3) Due to the province's shift to the sugar industry in the mid to late 19th century, Iloilo lost its primacy as *piña* producer. Only a handful of home-based *sinamay* weavers in Arevalo continue their craft and sell in one shop but many parts of Iloilo still make *patadyong*, the brightly dyed, plaid tubular garment, made of a combination of *piña*, cotton and *jusi* (banana fibre), which they refer to as *hablon* (Coo, 2018).

Formal wear garments made of *piña*, such as the *Barong Tagalog* (Tagalog shirt) for men (Fig 4) and the *Baro't Saya* (blouse and skirt), fondly called the Maria Clara, for women were traditionally identified with the economic and social elite of Philippine society. These are still worn today during special occasions by more people from seemingly all walks of life, although the women's wear has been transformed to the *Terno*, a form-fitted gown with stiff butterfly sleeves that at one time was associated with former Philippine First Lady Imelda Marcos during her husband's tenure and beyond. This has become part of the national dress ensemble (cf. Labrador, 1999).

The association of *piña* with the social and economic elite of colonial Philippines indicates its category of precious material that was acquired at great expense. It enabled preservation in museums because of the limited use of their wearers. The absence of more humble fabrics in museums, for instance, the outer skin of the pineapple leaves referred to by the locals as *bastos*, might have been used by those who could not afford to pay for the *linawan* fibre fabrics. Some impetus for embracing mass-manufactured textiles may have come from the demand of those who would like to wear something like the pure *piña* garments, visually representing formal wear, without having to pay more than they could afford. For conservators, it is important to be familiar with the materials, processes, and techniques of producing *piña* fabrics to be able to determine the fabrics.

There have been several publications on the conservation of textiles and objects in Asian collections. These refer to preventative considerations, or investigate more traditional or cross-cultural approaches of preservation (Brennan and Moreau, 2019; Heritage Conservation Centre, 2019; Fekrasanati and Schimmeroth, 2023; Wendt et al., 2021; Klein, 1997). Conservators could also refer to more publications focusing on narratives of handloom textile traditions in Asia and the Pacific (Zhao and Nosch, 2022; Zhao, Sardjono and Buckley, 2019; Maxwell, 1990; Barnes, 2004). In addition, more focused research on the *piña* and other Philippine handloom textiles serves to give conservators a more nuanced appreciation (Coo, 2019; Castro, 2018; Labrador, 2016; Guatlo, 2013).

Awareness, Community and Representation

Several historical collections of *piña* are in large museums all over the world, including the Metropolitan Museum of Art, Victoria and Albert Museum (Fig 5), Museo Nacional de Antropología in Madrid, Wereld Museum Leiden, Museo Histórico Nacional de Chile and even the Kew Gardens in London (in their economic botany section), among many others. This is an indication of its past popularity, and its connection to the Europeans' favourite luxury fruit, and royalty, as well as the previous owners who may be at a loss on how to look after their fragile garments.

In 2022, an exhibition 'From Pineapples to Piña: A Philippine Treasure was held for seven months on different sites within the Harvey Milk Terminal 1 at the San Francisco International Airport. A program to make collections and information more accessible to commuters, managed by the Aviation Museum and Library, the exhibition was well-received by the Filipino

community in the Bay Area. It made those who have seen it going through the terminal aware of the intricate art of the *piña* and its contemporary appeal. Lacis Museum of Lace and Textiles in San Francisco loaned most of the textiles on display, with the collaboration of The Hinabi Project of the city and the Manila-based Habi: The Philippine Textile Council (San Francisco Airport Commission, 2022).

At the time of writing, a *piña* textile is part of the objects displayed in the *Manila Galleon: From Asia to the Americas* exhibition at the Asian Civilisations Museum in Singapore (Fig 6), drawing its origins from colonial exchanges of objects, food, and knowledge. Ewbank (2018) underscored, quoting two experts she interviewed, 'it's likely that some piña clothing in museum collections hasn't been identified yet, due to a lack of early records and analysis'.

From 2017 to 2019, the National Museum of the Philippines with the Office of Senator Loren Legarda, organised a traveling exhibition to Europe, Americas, and Asia (Alvarez, 2020). Raquel Eliserio and her son, Carlo, agreed to travel with the team, along with embroiderers from Lumban, Laguna to the Asian leg of the programme, '*Piña-Seda: Pineapple and Silk Cloth from the Tropics'*. In Tokyo, Bangkok, and Singapore, they led the workshops and lectures for two weeks, delighting the participants as they enlivened the exhibitions with their stories about their lives as weavers, their transformations in practice, and creative inspirations.

There have been several trade fairs in which *piña* and other textile weavers join every year, such as that organised by the Habi Textile Council and held in Manila. A competition, named after their esteemed member and author, Lourdes Montinola, has been held for a few years now. In 2021, Raquel Eliserio was awarded the first prize with her entry 'Sintas' which, according to her description translates as lace and describes it as, 'combining inlaying cotton threads while weaving, pulling the threads out then twisting and lacing it'…creatively incorporating traditional embellishments such as *suksuk* or inlaid design, stripes, and open work called 'rengue' weaving technique. In the same Habi competition, her children Carlo and Delara won awards in special categories.

Conclusion: Conserving Textiles through Preserving Knowledge and Information

Besides the exhibitions and participation in artisanal textile fairs, documenting not just the weavers' activities but their names, biographies and processes, efforts to protect their intellectual property are beginning to take place through the National Commission on Culture and the Arts (NCCA), and the National Museum of the Philippines. The support from the former to run a School of Living Tradition in the Eliserio's property helped stir awareness among young community members. In the past weaving was primarily a woman's domain. This has changed. Community action through schools of living tradition helped to break down stereotypes and gender bias, to open access to a meaningful and financially rewarding practice.

Having organised the Aklanon Piña Fiber Producers Association, Carlo Eliserio has been training others in the art of dyeing *piña* using natural materials and designing garments to innovate its wearability, besides participating in fashion shows. Rather than catering to the demands of

Manila consumers, they have also developed events that serve to draw visitors to Kalibo, Aklan's capital city, such as Hinaboe 2023 in April and the first Aklan Fashion Week that was held on the last week of November 2023. This has momentarily deflected attention from the beach resorts with which Aklan is famous for, showing creative industries in their province. Outsiders' interests brought about a self-consciousness among the *piña* weavers and embroiderers. While no collaboration has yet taken place with renowned fashion designers who would visit them, this attention has stirred further creativity and future opportunities.

Conservators might also use this information for future research in understanding the materiality of *piña*. For instance, I have an ongoing study on the professional relationship established through embroidery between Kalibo, Aklan, and Lumban, Laguna that has on occasion become collaborative and experimental. With an anticipation of both historical and contemporary *piña* collections acquired by museums and other collecting repositories, conservators must be aware that other fibres may be blended in their weaving and develop protocols for collections care particularly those embedded in the textile's biography.

It may also be more productive to use alternative frameworks for assessing conservation instruments as Tse, et al. have proposed (2018). The conventional tools to assess and manage risks to cultural material, such as the "ten agents of deterioration", have a central focus on the primacy of objects, physical materials, and degradation. To assert preventive conservation principles, there should be more focus on a relationship with people, place, and time in its modelling. This is particularly useful for assessing conservation treatments for handloom textiles like *piña* as we have been discussing in this paper.

The waning of *piña* weaving and production, such as took place in Iloilo, is not likely in Aklan for many reasons. One is the newly reviewed Tropical Fabrics Law with the Philippine Textile Research Institute of the Department of Science and Technology. Compliance among government agencies that issue employees' uniforms will develop more demand for local fabrics. This is the case for the diaspora communities, who have become aware of their representation on the international stage (Fig 7), invoking the unique nationalism among Filipinos as expressed in dress (Milgram, 2005). In December 2023, Aklan piña handloom weaving was included in the representative list of the UNESCO Intangible Cultural Heritage for Humanity. This will ensure the protection of the intellectual property of the weavers, embroiderers, and other participants in its production.

Standardization of the handwoven *piña* was also initiated by the Philippine government through a technological approach ensuring its preservation and sustainability in the country. Government agencies like Philippine Fiber Industry of Department of Agriculture through its mandate created a technical working committee including master weavers like Carlo Eliserio, cultural master like Raquel Eliserio, and other stakeholders to publish Philippine National Standard for Pineapple Fibre-grading and Classification (Bureau of Agricultural and Fisheries Standards, 2021).

Through the government laboratories, *piña* was examined and its technical factors recorded, like colour, texture, length, and tensile strength. This collaborative initiative determined the reason why the red Spanish variety of pineapple is preferred by the *piña* artisans of Aklan among four varieties that have been growing in the country. Laboratory results show that the red Spanish *piña* propagated in Aklan has an average of 36.32 kgf/g.m., relatively the highest compared to the other three (Bureau of Agricultural and Fisheries Standards, 2021).

Finally, by participating in meetings like this one, we also promote our advocacy to preserve not just *piña* but also traditional knowledge for the next generation (Fig 8).

Authors:

Dr Ana Maria Theresa Labrador has a PhD in social anthropology and museology from Cambridge University and an MA in Museum and Gallery Management from the University of London. She is currently Honorary Senior Fellow at the University of Melbourne and a member of the International Conservation Advisory Panel for National Heritage Board, Singapore, the ICOM Standing Committee for Museum Definition and Secretary of ICOM Asia Pacific Regional Alliance.
As well as being an editorial board member of several journals, she has written extensively on social anthropology, preventive conservation and art history. Her latest work is a chapter in a book which provides insight into complications of organizing an exhibition caught during the global lockdown.

Carlo Reporen Eliserio is an expert weaver, trainer, and master natural dyer. For the past seven years, he has been an advocate of natural dyeing for sustainable consumption and production. He comes from a family of pineapple fibre producers and expert weavers in the municipality of Balete in the Province of Aklan in the Philippines. He did his natural dye training and seminar program at the Philippine Textile and Research Institute under the Department of Science and Technology. He has since trained dyers and indigenous fabric producers in a number of provinces and is currently training and promoting natural dye techniques to entrepreneurs, local producers, indigenous fabric weavers, and the indigenous community in Aklan. Eliserio is an active advocate committee chairman of the Aklanon Piña Fiber Producers Association and a member of the Association of Civil Engineering Students.

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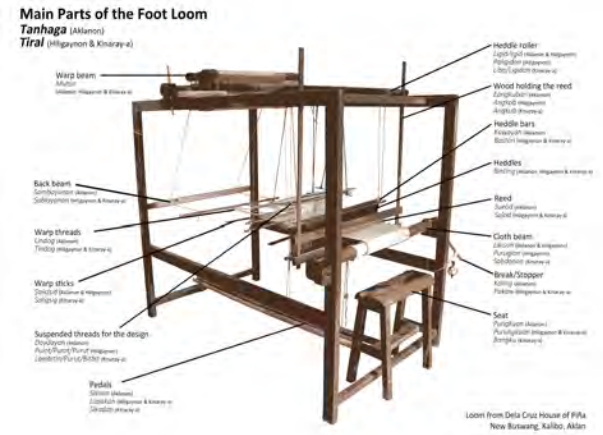

Fig 1. Tanhaga_Aklan Loom (Courtesy of the National Museum of the Philippines)
Fig 2. Weaving centers_Western Visayas (Courtesy of the National Museum of the Philippines)

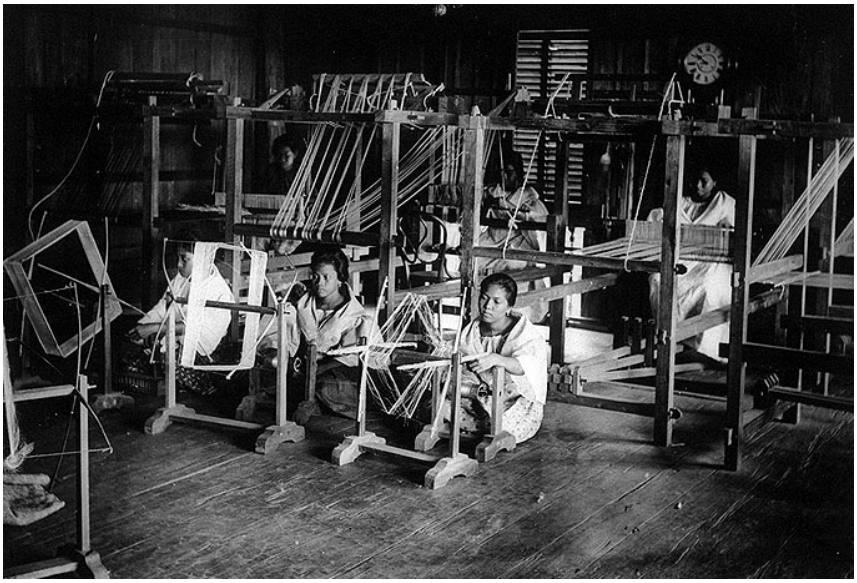

Fig 3. Workshop_textiles Iloilo (Courtesy of the University of Wisconsin)
Fig 4. Indio_Album de Filipinas_1870_BNE (Courtesy of the Biblioteca Nacional de España)

Fig 5. V&A piña wedding dress 1828_Northumberland (Courtesy of the Victoria and Albert Museum)
Fig 6. Manila Galleon From Asia to the Americas Special Exhibition Gallery (Courtesy of the Asian Civilisations Museum)

Fig 7. University of Hawaii at Manoa students workshop on pina embroidery (Photo by AMT Labrador)
Fig 8. Intergenerational pina weaving heritage, Carlo on the hammock as Raquel prepares yarn (Courtesy of the Eliserio Family)

‘The never-ending story…
How to read and handle the tales of play(ers), forever embedded within the material biography of puppets.’

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Introduction
The puppet’s tale(s), their museum life and their IRPA’s story

In 1957, a travelling puppet theatre was discovered at the house of the grandson of the last puppeteer that made, and played, with these puppets in the 19th century. Conscious of the great heritage value, the Art & History Museum in Brussels[1] (MRAH) acquired this exceptional collection consisting not only of string puppets (marionettes)[2], garments and accessories, but also of various other objects that provide rare context information.

Three of the most valued surviving theatre puppets[3] from this collection were recently researched and conserved at the Royal Institute for Cultural Heritage in Brussels (KIK-IRPA)[4]. For conservation research, it was essential to gain a better understanding of the use/play practices of these puppets and of the possible ‘traces of use’ that were to be found in their ‘material biography’. In order to obtain and assess this information, scientific imagery and multiple conservators[5], conservation scientists, the collection’s curator, the archival and ensemble research and last but certainly not least, a current day puppeteer, all proved instrumental for the understanding of these objects. (Fig 1)

Currently, three 19th century string puppets (marionettes) from another collection in Belgium have entered KIK-IRPA and its conservation studios. Here the context is rather different. Even though these puppets were recently given a protected heritage status as ‘highly significant intangible

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[1] Art and History Museum: https://www.artandhistory.museum/en Website last consulted on the 24th of November 2023.
[2] Throughout this article, the terms ‘puppets’, ‘string puppets’, ‘theatre puppets’ and ‘marionettes’ will be used interchangeably.
[3] BaLAT Belgian Art Links and Tools database of the KIK-IRPA: https://balat.kikirpa.be/intro.php?lang=en-GB Website last consulted on the 24th of November 2023.
[4] Royal Institute for the Cultural Heritage: https://www.kikirpa.be/en/ Website last consulted on the 24th of November 2023
[5] The conservation studio’s involved are the Textile Conservation Studio (Head of the studio: Griet Kockelkoren), The Polychrome Woold Sculpture Conservation Studio (Head of the studio: Emmanuelle Mercier) and the Preventive Conservation Unit (Head of this unit: Marjolijn Debulpaep). Conservation and restoration | KIK-IRPA (kikirpa.be) Website last consulted on the 24th of November.

heritage objects', they are still in ownership of the last puppeteers that actively played with them. The research and conservation aim is similar, as are the heritage specialists involved. In addition the valuable and rare input during an exciting interview with a.o., the oldest puppeteer, has broadened insight and understanding of the tales that the material traces of use can tell. (Fig 2)

With this article it is time to drop the curtain on the research and conservation of these exceptional theatre puppets.

Tracing back the threads of history of the travelling puppet theatre at the Art & History Museum

The 'European ethnology' collection at the Museum of Art and History includes more than 500 objects belonging to the world of puppetry. They illustrate how popular puppetry was in the 19th and early 20th centuries. The major Belgian cities had several puppet theatres and quite a lot of material from this has been preserved. However, the remains of a travelling puppet theatre, which brought entertainment to people in the villages and hamlets, are much rarer.

The puppet theatre of the Van Weymersch family is therefore a unique remnant of a largely disappeared heritage. It includes not only beautiful carved wooden puppets with their rich costumes and accessories, but also other objects such as stage sets, textbooks, entrance tickets, a viewing box with prints and some archive documents. In the 1960s, research of this valuable ensemble, supplemented by the testimony of the grandchildren of the last puppeteer, yielded a great deal of information (Van de Velde 1963) that is only briefly presented here.

Jan-Baptist Van Weymersch (1780–1858) began his career as a fiddler, and in 1828 he started puppet shows. Jan-Baptist was born a farmer's son, he married Brussels seamstress Anna-Josepha Quinnart in 1804. Together they had a son, Charles-Louis (1817–1897), and both later became his assistants. They travelled around Flanders on foot, performing in Dutch for an adult, often illiterate, audience.

In the early years, their repertoire mostly consisted of legends, fairy tales and folk stories. Later, under the impulse of Charles-Louis, who had a great love for the real, live theatre, they performed adapted versions of Voltaire, Molière and works from 18th-century Dutch literature. Tragedies, melodramas, comedies and farces all featured.

In its glory years, the theatre enjoyed great success. The elder Van Weymersch played with his son until 1854 and then retired. In the following years, the number of performances decreased. In 1870, the curtain finally fell on the puppet theatre.

Although the 1960s research revealed a lot, many questions remained unanswered. The material and the historical research of this conservation project ran alongside each other and tried to fill in some of the remaining gaps to reinforce and support each other.

The 'forest' of hanging puppets in their protective white cotton covers in the storage rooms of the museum were just a short drive around the park from the KIK-IRPA's and the Art & History Museum's buildings, where the conservation studios are located. Because many objects travel to KIK-IRPA's textile conservation studio from various locations in Belgium, strict precautionary IPM[6] measures are taken to prevent possible cross-infection of other objects and collections. In this case

[6] What's Eating Your Collection is a website to help you understand what integrated pest management is, how to carry it out and how it can help you in your museum: https://www.whatseatingyourcollection.com/ (Website last consulted on the 24th of November 2023)

the use of Prussian Blue was suspected, and material analyses confirmed[7] our suspicion, especially in the dress of the female figure. Therefore, anoxia was not the preferred choice of treatment (Rowe 2004; Gervais 2014) and a monitoring system was set up instead. (Fig 3)

Whilst awaiting the results of the IPM check, the context research began. At first the puppets were referred to as 'the Oriental Figure', 'the Lady' and 'the Soldier'. Via the current curator, access was given to not only all the other objects belonging to the puppeteers, but also to the great secondary source, the article already mentioned above. This also included a black and white image that was a great reference to try and establish the objects condition evolution during the seven decades of their museum life. (Fig 4)

The original handwritten playbooks and the other collection elements were consulted in the museum's storage rooms. The search throughout the many players booklets was given priority to see if references to the plays the puppets 'starred in' could be found. If they could be tied to certain plays, maybe action points in the stories could be found and maybe, via this info, certain 'traces of use' could be linked to elements of action on the stage. Without this context information, 'traces of use', found on the objects might be mistaken for undesired change or damage (Smith 1995; Stanisforth 1994) and not as significant traces of use. (Michalski and Pedersoli 2016; Brokerhof and Bülow 2016; Waller 2003; Ashley-Smith 1999) (Kockelkoren and Damen 2020).

Alongside the stories, many notes can be found in the booklets. This search turned up less than was hoped for, but the handwritten descriptions and names noted in the booklets made it possible to link various roles/parts to the puppets. (Fig 5)

The booklets revealed notes of names alongside characters. The puppets clearly bore their own names, represented a particular character, had a personality and were assigned roles that best corresponded to them. Based on the notes, the three puppets were identified as follows. The Oriental figure is most likely 'the Husaer'. This assumption is based on his colourful attire because the 'Hungarian hussars' were garbed horsemen. The notes also describe 'the Husaer' with a coarse nose, also a distinctive feature of this puppet. Several female roles were identified: Griet, Queen and Percurius. The latter two could possibly be linked to 'the Lady'. A handwritten note describing 'the Queen' reads, 'with a (mourning) cloth attached to her nose'. 'The Lady' puppet has a pin (nail) under her nose, which suggests functioning as an attachment for the cloth. 'Percurius' is mostly described as a lady wearing a cap with 'boeffel'. This may refer to a canopy hat with bavolet as the one nailed to 'the Lady's' head. No other hats or female puppets with hats have been found.

Several 'soldiers' are mentioned. It seems that different marionettes could become a soldier simply by adjusting their clothes. 'The soldier' treated at KIK-IRPA probably always played a soldier because only the jacket is interchangeable. One description also mentions that the soldier sometimes wears a blue, red or white coat to represent different ranks. (Fig 6)

With these discoveries and a newly gained look into the lives of these fascinating objects and their uses, the more in-depth material research began back in the studio. Even though a strong focus on the significance of 'traces of use' has been a key element for conservation decisions in KIK-IRPA's textile conservation studio before, for the first time a chapter titled 'material biography of the

[7] Prussian blue was identified on the blue coat of the female puppet by the KIK-IRPA Textile Research Lab. The detection was done by micro Raman spectroscopy. The non-invasive Raman point measurement was performed using a fibre-optic Raman analyzer (Renishaw Virsa), with diode laser excitation at 785 nm and with variable power between 0.3 and 50 mW. The laser power was kept between 0.5-1 mW to avoid possible damage to pigments/textiles. KIK-IRPA Textile Research Lab : https://www.kikirpa.be/en/scientific-analyses/textile-lab (Website last consulted on the 24th of November 2023)

object' (Whyman 2019: 18) was added to the conservation report. The underlying idea is to highlight 'traces of use' and to advocate more awareness for their significance and potential agency (Whyman 2019: 19). Also to make these findings, that can directly support context research, more clear and more easily consultable for other researchers.[8]

Even after all this preliminary research, unknowns still remained. For example, one leg was shorter than the other. And there was uncertainty about the manner of attaching the binding cords that provided movement to the puppets. Therefore, a current day puppeteer was invited to help shine a light on these questions.

Through the curator, advice was sought from Paul Contryn, a well-known Flemish puppeteer who also comes from a family of puppeteers. He had seen the puppets were in an exhibition years ago and never thought he would ever be able to admire and touch them so closely. He finds them fascinating and considers it a small miracle that they have survived.[9] He came to the conservation studio to help answer the remaining questions together. At least, that was what the conservation team expected was going to happen. The collection's curator was also present during this visit and when it became clear that some conundrums could only be solved by handling the puppets, this is exactly what happened in that moment. The skilled hands of Paul Contryn brought the Mameluke back to life and transported all present for a brief moment to the 'life of play' these figures once had. Even though he and the 'Mameluke' only took a few steps, it was directly obvious why one leg was shorter than the other, namely to simply allow the movement of 'walking'. Seeing the shape of the cross (handle), it revealed that the original puppet player must have been left-handed.

The investigation of the wear and tear patterns also added extra information. Looking at the old images and at the current binding system, there was uncertainty about how the system worked, but also to what arm was free moving and what arm was bent and therefore more 'fixated' close to the body. By comparing places of wear on the sleeves and on the bodice, a well-informed assumption (Whyman 2019) could be made about what arm was bent and even on the angle it was bent.

Our conservation scientists[10] and their work with the Hirox (digital) microscope gave much more insight into the hand that made the clothes (the puppet player's wife). Very little seemed to have been changed on the garments over time, except from beautiful and skilled mending that symbolises how much the garments were valued by the players themselves. It also provided new perspectives on the origin of stains. Despite this, not all stains and wear and tear could be placed in context and be linked to the use of the active performing life of the puppets, nor to their museum life. Therefore, the unattributed traces of use were not removed during treatment[11] and remain researchable in the future. For all those involved in this project, the significance of the traces of use was very clear. The same goes for the agency (Whyman 2019: 19) and relations these puppets have had in the past and can establish now and in the future (Bauer 2019). (Fig 7)

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[8] This idea is developed further in an ongoing PHD research of Griet Kockelkoren, affiliated with Antwerp University (U.A. - Main University), Université Libre de Bruxelles (U.L.B.), the Fondation Périer-D'Ieteren and the Royal Institute for Cultural Heritage (KIKIRPA).

[9] Oral testimony from Paul Contryn to the collections curator and co-author of this article Linda Wullus.

[10] Researched by the KIK Textile Research Lab and the Paper Research Lab, by Marina Van Bos and Maaike Vandorpe. https://www.kikirpa.be/en/scientific-analyses/textile-lab Website last consulted on the 24th of November 2023.

[11] In both the textile and polychrome wood sculpture studio the treatments needed to be discussed and aligned so there would be no visual or ethical/conceptual discrepancy after conservation… The expert conservators at KIK-IRPA that actively worked in close collaboration and in alignment with each other on the objects during the entire conservation treatment process: Griet Kockelkoren & Wies Stortelder (conservators of textiles) and Erika Rabelo (conservator of polychrome wood sculpture).

For this collection the conservation needs of the objects and the conservation aims of all involved were pretty clear.

Yet another collection of historic playing puppets, still in the hands and ownership of an existing and very active puppet theatre came to the IRPA from a very different place and mindset.

Looking at the future whilst learning from the past and whilst learning from the family of puppeteers that performed with the puppets of theatre Toone.

With the attribution of a part of their collection as 'intangible heritage'[12], the family of multiple generations that owns and runs the puppet theatre 'Toone'[13] in Brussels, took a significant step outside the world they know so well, into the heritage and conservation field.

The Royal Theatre of Toone, building on a long-standing tradition, persists today as the last bastion of a Brussels popular tradition, that of string puppets (marionettes). Around 1830, Antoine Genty, known as "Toone," opened his *poechenellekelder* (puppet cellar). Since then, no fewer than eight generations of "Toone" have succeeded each other, now under the leadership of José Géal[14] (Toone VII) and his son Nicolas[15] (Toone VIII). It's a truly unique collection of approximately 1400 puppets illustrating nearly two centuries of tradition. Most of the historic puppets make up the "Wolfers collection." This collection is associated with the Brussels sculptor and jeweller Marcel Wolfers. Enthusiastic about this popular art, the patron purchased in 1927 a set of 125 puppets from Toone V, who had been under threat to close his theatre and sell the puppets. Wolfers left them on deposit so that Toone could continue his activities.

As stated by 'Région bruxelloise (Direction du Patrimoine culturel - Urban.brussels)', the collection of the old puppets[16] is of great significance to Brussels' cultural heritage. Its rarity and role as a living fragment of regional history make it particularly valuable, serving as the last witness to a Brussels tradition and expertise. It is noteworthy that the material history of these puppets is characterised by repairs or other restorations, occasionally blending the new with the old.'[17]

The three chosen marionettes that are currently at KIK-IRPA, represent some of the finest of 'Toone's collection'.

Via an inventory[18] drafted by Constantin Pion of the documentation department at KIK-IRPA, focusing on the oldest puppets, the first bridges between the family and KIK-IRPA were built. Lengthy Interviews with the owners/players and the caretakers (the above-mentioned puppeteers, but also significantly with Mrs. Andrée Longcheval, the wife of Toone VII and mother of Toone VIII

[12] By the 'Région bruxelloise (Direction du Patrimoine culturel - Urban.brussels)

[13] Link to the website of the 'Theatre Toone'. http://www.toone.be/?lang=en Website last consulted on the 14th of November 2023.

[14] Victor José Géal - Toone VII, Président (chairman) and founder of the ASBL (non-profit organisation) Théâtre Royal de Toone.

[15] Nicolas Géal - Toone VIII, Director of the Théâtre Royal de Toone.

[16] The inventory of the Wolfers Collection is accessible via the photo library of the IRPA: https://balat.kikirpa.be/results.php?linkthrough=P1&linkval=Wolfers%2C+Marcel%5Bcollection%5D%5BBruxelles%5D Website last consulted on the 14the of November 2023.

[17] https://collections.heritage.brussels/fr/institutions/5 Free translation to English of the information written here. Website last consulted on the 14th of November 2023.

[18] This inventory is accessible via the Photo Library of the IRPA https://balat.kikirpa.be/results.php?typesearch=advanced&institute=Th%C3%A9%C3%A2tre+Royal+de+Toone Website last consulted on the 14th of November 2023.

who takes on the role of 'collections curator and archivist'[19]) helped in a very important manner with the initial selection of the most significant puppets in need of conservation. Another bridge that supported the connection between the owners and KIK-IRPA was made by the King Baudouin Foundation[20].

The family values and knows these objects like no other, for they have played and performed with them. Without the attentive care of the puppeteer's family for this 'living heritage' this incredible collection would not have come to us in such a good condition. Even though the puppets are currently retired from their active performing lives, needless to say, that a 'treatment' means different things in the world of a working and living puppet theatre than in a long-standing scientific heritage institute focussed on conservation and research of heritage. The family wanted to make sure their valuable and irreplaceable objects would receive the best care and treatment. When contacting KIK-IRPA's conservation department, the owners did not know what to expect, and the conservators sensed this as well. Therefore creating confidence and a common language and understanding proved a work in progress. The conservation studio's involved are again the Textile Conservation Studio, the Polychrome Wood Sculpture Conservation Studio and the Preventive Conservation Unit[21].

The common ground from the start of the conservation project was how much all parties involved were convinced of the great value and significance of these specific objects and collection at hand, and of the incredible and unique context value provided by the family and, most specifically, by the oldest puppeteer Mr José Géal (Toone VII). (Fig 8)

Even after spending multiple days together in preparation of the conservation proposal, when submitting the written proposal (dossier), misunderstandings became apparent. Perhaps at the outset of the project, the 'values' attributed to various aspects differed among the diverse actors connected to it. Part of the process involved identifying both commonalities and disparities in these values. Therefore, taking a step backwards was important and a realignment was discussed in order to identify and agree upon common understandings, common focuses, and common aims for this project. To achieve this, all embarked in a new process where a 'new selection' of puppets was made.

Communication, interviews and debate was envisaged by KIK-IRPA's conservators from the very beginning of the project, but by making this 'communication plan' even clearer, this created trust and brought everyone closer in mind. This alignment of minds not only takes place in KIK-IRPA, but also in the Toone theatre where the preventive conservation unit of KIK-IRPA was, and still is, working very closely with the family and everyone involved on the theatre's side. By helping and supporting them with all the questions and challenges that needed to be tackled there, not only durable storage as a focal point, but also exchanging ideas about future wishes, possibilities, consequences and risks for display.[22] (Brokerhof 2006: 2; Michalski and Pedersoli 2016; Brokerhof and Bülow 2016; Waller 2003) The decisions made there are also important for the decisions concerning the active conservation of the puppets, therefore we all keep in close contact throughout the entire process.

[19] Andrée Longcheval, curator-archivist of the Toone Museum.
[20] The King Baudouin Foundation that supports this project in more ways than one. https://kbs-frb.be/en Website last consulted on the 14th of November 2023.
[21] The conservation studio's involved are the Textile Conservation Studio (Head of the studio: Griet Kockelkoren), The Polychrome Woold Sculpture Conservation Studio (Head of the studio: Emmanuelle Mercier) and the Preventive Conservation Unit (Head of this unit: Marjolijn Debulpaep). Conservation and restoration | KIK-IRPA (kikirpa.be) Website last consulted on the 24th of November.
[22] See Figure 1: Triangle of collection management.

Before the puppets travelled to KIK-IRPA, a tour of the conservation studios involved showing and explaining the care and attention the puppets would receive. After this visit, the work in the conservation studios began with highly detailed photography of the puppets and radiography.[23] Condition reporting not only revealed the conservation needs of the puppets and their different components but also made the remaining questions and unknowns clearer, concerning the physical traces found within the material biography of these fascinating and 'layered' objects.

Being heritage that is still very close to the hearts of many in our current society[24], during KIK-IRPA's annual open day in 2023, the public was asked what they thought about two specific conservation conundrums or choices[25]. Many, very unexpected but also very interesting answers came in regard to the polychromed face. Peculiarly enough, no written input came in regard to the questions concerning the renewed hair of one of the puppets in the textiles conservation studio.[26] Lots of information, but also the remaining questions were gathered. It was time to liaise and touch base again with the family/owners and to talk and decide together what the aim of the conservation treatment would be.

During an official meeting, not only the family of puppet players was present, but also the long-time costumier of the family, Chloé Pierard, and Delphine Clarinval, operational manager of the Toone Museum. After a short briefing with a PowerPoint and coffee, where some of KIK-IRPA's ideas, insights and discoveries were briefly presented, all minds really started to feel aligned and the entire group made a dive into the studios. The first stop was at the radiography unit[27] where the images showed the puppets, even for the family, in a whole new light. Here the passionate discussions and exchange began and it continued in the same exciting spirit when all finally gathered around the material objects now partly deconstructed. The setting was formal, the interview was recorded with consent, but the feeling of the discussion was very informal and positive. Being storytellers at heart, this day and interview was more than exciting and enriching for everyone present and for the project as a whole. (Fig 9)

We discussed from the smallest material details to memories of plays and details of the plays the puppets performed in. Some questions became instantly obvious when addressing them…for example, a very strange sort of yellowish soiling is seen on all puppets. During the talk it became instantly obvious that they are nicotine traces from the time people could still smoke in the same area as the marionettes. Due to the bias related to the time we live in now, it wasn't immediately thought of, but once it was suggested that 'aha moment' came instantly.

Then there were water stains on the sleeves. They were deemed probably not from the stage, but very likely due to the fact that the theatre travelled with the puppets to many different places and in all kinds of Belgian weather. The puppets were moved (without being packed first) from the theatre(s) to the back of the car.

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[23] Radiography made in KIK-IRPA by Catherine Fondaire. Scientific Imagery | KIK-IRPA (kikirpa.be)

[24] Social utility as mentioned by ICCROM here f.e. in the ICCROM note 'Sharing Conservation Decisions.' https://www.iccrom.org/sites/default/files/2018-05/sharing_conservation_decisions_2018_web.pdf Website last consulted on the 14th of November 2023.

[25] This idea derived of and was developed by Emmanuelle Mercier, head of KIK-IRPA's polychrome wood sculpture studio. Enthusiastically following this idea, it was later adopted by KIK-IRPA's textile conservation studio.

[26] In both the textile and polychrome wood sculpture studio the treatments needed to be discussed and aligned so there would be no visual or ethical/conceptual discrepancy after conservation… This was also a focal point during the discussion with the owners to manage and align visions and expectations in this regard.

[27] Radiography made in KIK-IRPA by Catherine Fondaire. High Resolution images made by Stéphane Bazzo Scientific Imagery | KIK-IRPA (kikirpa.be) Website last consulted on the 14th of November 2023.

Another example is that there is a very distinct wear and tear pattern across the chest of one of the puppets. On reflection, this could in effect directly be linked to a play/scene, but it is too early in the project to unveil 'the act' (of the play) behind it. Also tailor pins were present, often showing signs of oxidation. Chloé Pierard however stated that they would have always been present to make sure wardrobe changes were easy and practical. These were just some examples derived from this incredible moment of exchange and we hope many more will come as the project continues.

One of the most valuable moments that provided food for thought to understand the layered significance was right at the end of the discussion when José Géal (Toone VII) was asked about the black hair and clothes of the 'chevalier/knight'. His response was: His clothes and hair are very black and this means his character is too… He is a mean one he is![28] And with that quote this puppet became alive and so much more than just a material object. We are looking forward to more tales to discover and tell when hopefully both projects continue in the future.

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Linda Wullus holds a degree in Art History and Archaeology (VUB) and studied painting restauration & conservation techniques at the Academy of Fine Arts in Anderlecht. In 2002 she joined the Royal Museums of Art and History in Brussels. As curator of the European ethnology collection, she researches the history of the puppet theatre collection and tries to valorise it through various projects.

[28] Free translation.

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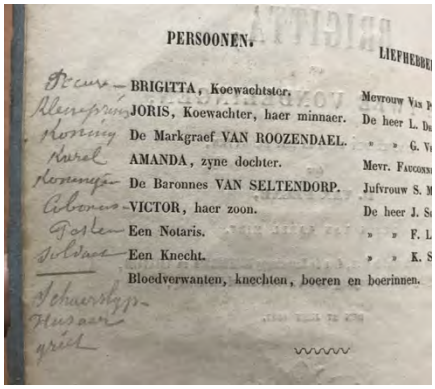
Fig 1 *(Left)*: Theatre puppets from the collection of the Art & History Museum in Brussels MRAH ©KIKIRPA

Fig 2 *(Right)*: Theatre puppets from the collection of the Royal Theatre of Toone ©KIKIRPA

Fig 3 *(Left)*: Theatre puppets from the collection of the Art & History Museum in Brussels – prepared for IPM check ©KIK-IRPA

Fig 4 *(Right)*: Image from 1963, of the theatre puppets from the collections of the Art & History Museum in Brussels. Notice the hand holding the curtain. (Van de Velde 1963) ©MRAH



PERSOONEN.

BRIGITTA, Koewachtster.
JORIS, Koewachter, haer minnaer.
De Markgraef VAN ROOZENDAEL.
AMANDA, zyne dochter.
De Baronnes VAN SELTENDORP.
VICTOR, haer zoon.
Een Notaris.
Een Knecht.
Bloedverwanten, knechten, boeren en boerinnen.

Fig 5: Handwritten notes in booklet F.4659. ©KIKIRPA

Fig 6: Soldier coats from the collection to represent different ranks ©MRAH

Fig 7 *(Left)*: Detail of beautiful mending of a worn part in the Husaer's upper sleeve, most probably executed by the puppet player's wife who also made the clothes. ©KIKIRPA

Fig 8 *(Right)*: José Géal (Toone VII), sharing knowledge about the theatre puppets of theatre Toone with/in KIK-IRPA ©KIKIRPA

Fig 9: Looking at the Radiographic images, exchanging knowledge and insights ©KIKIRPA

Tsumpa Cham

Ann Shaftel
Treasure Caretaker Training

Abstract
Cham is frequently described as sacred Himalayan Buddhist dance. Usually performed once a year in monasteries and their communities, Cham features awe-evoking music, dramatic masks, elaborate costumes, and powerful dance movements in a spectacular religious and social event. You may have even seen photos and video of cham performances in tour advertisements.

The author has over 50 years of Cham study: observing, interviewing, and working closely with dance masters, dancers, tailors, those who help dress the dancers, and those responsible for storing the Cham attire after use.

This presentation shares the ongoing conservation work taking place in the Tsum Valley, a remote community in the high altitude, mountain region of Nepal bordering Tibet. Working with the non-profit organisation Treasure Caretaker Training, our conservators travel to this hard-to-reach region to be of service to the community when it brings the Cham to life in accordance with the lunar calendar.

To illustrate this conservation work, Treasure Caretaker Training has produced a Tsumpa Cham video that demonstrates traditional usage and safe storage of Cham attire.

History of Treasure Caretaker Training and Tsumpa Cham
The Tsum Preservation Project is a five-year community-driven effort with Treasure Caretaker Training. Registered as non-profit in 2015, Treasure Caretaker Training (TCT) continues the hands-on preservation and educational activities in nunneries, monasteries and lay communities that had begun in 1970 in India and Nepal with the Founder/Executive Director and this paper's author. In 2014, Treasure Caretaker Training (Digital Monastery Project) won the prestigious Chairman's Choice award from the international Digital Empowerment Foundation for innovative work teaching documentation on cellphones to prevent theft and preserve history of sacred art in lay and monastic communities. TCT constantly updates team members according to the project/venue. Our Advisors include Buddhist teachers and scholars. TCT is dedicated to the preservation of sacred Buddhist treasures. TCTworks directly with monastics and community members who are the daily caretakers of these treasures, respectfully offering them low-cost and practical tools that combine science with traditional methods.
The four main activities of Treasure Caretaker Training (TCT):

1. Preservation training workshops
2. Preservation hands-on projects for lay and monastic communities
3. Virtual webinars and consultations
4. Online preservation resources on website Treasurecaretaker.com

The author of this paper is the first professional conservator invited into this remote region; a network of villages with a centuries-old culture, led by a hereditary line of married Buddhist leaders. There are no roads, yet the culture is changing quickly with internet access, trekkers, and young people going away for education and work. The community leaders are concerned about the dissolution of their traditions and cultural heritage, both tangible and intangible. As expressed by a Tsumpa (Tsumpa denotes a person or custom of Tsum) named Tenzin Norbu, 'We regard thangkas, texts, and statues as not only family treasures but memories of our past generations.' This area of Tsum is especially interesting as many treasures were brought over the mountains from Tibet and left in Tsum for safe keeping as people travelled on. These treasures, rarely seen, are kept inside trunks in monasteries and in homes. Our team has been invited to see them for purposes of documentation, conservation stabilization procedures, safe rehousing, usage, and display according to the wishes of the community leaders.

This remote area can only be reached by a trek of several days or by expensive helicopter access. *Fig. 1.* It is prone to natural disaster: when we were there in October, the rains washed out the trekking paths leading to landslides and the danger of rising rivers. During the Tsumpa Cham performances, the heavy rain and sleet continued, pounding down on the dancers and soaking their elaborate attire during their dance.

Lama Pasang is the hereditary leader of the Tsum Nagk Labrang and considers preservation of local traditions to be an important part of his responsibilities. Trained in Cham dancing from childhood, he recalls learning from his father all the techniques and about the dance robes and their prescribed iconography. Due to his status in the community, he features prominently in the yearly Cham performance.

Lama Pasang places the beginning date of Cham in Tsum Nagk Labrang at the 12th century. The practice is still going on there for 25 generations. He considers Tsumpa Cham one of the most important local traditions to preserve.

The towns in the region take turns hosting Tsumpa Cham, one year in Leru Village, one year in Tsum village—once a year according to the lunar calendar.

Lama Pasang explained that the Tsumpa Cham tradition is part of their oral history passed down from generation to generation. Since the oral tradition is waning and younger generations are moving away, he sees the need for documentation of the Cham attire and dances—every stitch and every step, according to local tradition.

Lama Pasang is also concerned about the longevity of the older traditional textiles as well as the newer Cham attire, and he requested advice on their safe storage within the monastery.

Costumes

In the past generations and centuries, the community did not have all the Cham attire it needed to complete the iconography of deities enacted in Tsumpa Cham. The older costumes, according to Lama Pasang, were brought from Tibet or donated by the local community. When I asked

Lama Pasang about the older robes used by previous generations, he said that they were in storage in the monastery.

Now, however, a complete series of attire has recently been donated. The new Cham robes are made from fine Varanasi silk and sewn by traditional tailors in Kathmandu. The boots and masks are also made by artisans specializing in these traditional forms.

New Attire Arriving

The author, as the lead of the Treasure Caretaker team, arrived on the same helicopter that transported the new robes, masks, boots, and implements along with the Cham Dance Master and a donor from New York City, who grew up in Tsum. *Fig. 2.*
During the perilous transport from Kathmandu to the Tsum community, the helicopter was overloaded with masks, robes, and monks, and we flew through a storm of wind and rain.

Getting Dressed

The process of each dancer being assigned and trying on a mask, possibly a crown, elaborate robes or character costume, boots (which may have been worn by previous generations of dancers or may be newer), etc. is supervised by the Cham Dance Master, senior monks, men who previously were monks, and senior community members. *Fig. 3.*

The donning of the Cham attire is truly a transformative process to observe. The author documented the process of donning robes, boots, masks, crowns, and sacred implements used in the Tsumpa Cham singing and dancing.

Specific attire was reserved for the main lamas of the monastery and village elders. For example, the large and elaborate golden figure of Padmasambhava (also known as Guru Rinpoche), would be worn by Dungse Lama Pema.

Practice

The author then documented practice sessions of singing and dancing. The five days of performance included singing by visiting nuns. A professional theatre group from Kathmandu practiced the rarely seen Milarepa Life Story in song and dance. The dancers practiced late into the night in the Tsum Monastery courtyard—dancing in the dark, the cold, and the rain. *Fig. 4.*

Cham Performance in the Rain and Sleet

Unusual for October, the weather was very cold with sleet and heavy rain. Nonetheless, the Cham continued; the dancers stepped and spun through the puddles on the slate courtyard paving stones. The elaborate Cham costumes became soaked and heavy on the bodies of the dancers, and the wet soles of their boots were not up to the slick conditions. *Fig. 5 & 6.*

The Milarepa Dance Cycle
According to Lama Pasang, Milarepa is a Buddhist sage who attained enlightenment in one life. He is especially respected in the Tsum Valley, where he came to practice. There is a cave within trekking distance of the monastery where he practiced, which is why the Milarepa Dance is so important to the local community.

The Nepal Opera Group was invited to Tsum to perform the Milarepa play, according to Lama Pasang, for the first time in 2022. This was highly popular with community members from the surrounding villages, who came to see the dramatized saga of Lord Mila for the first time.

Drying
Following the performance of the dances, the rain continued. At first, the monks in soaking wet robes dried their costumes in the main shrine hall. When the weather changed and the sun appeared, robes, boots, masks, and props were hung up or laid out everywhere in the monastery courtyard. *Fig. 7.*

Traditional storage
Traditional storage methods were documented: the boots disappeared into large bags that once held grain, the robes were folded into trunks and suitcases with paradichlorobenzene inside, and the masks were wrapped and stored in bins or placed on shelves. Not all were completely dry at the time. The bins, suitcases, and bags were placed into storage above the monastery office accessed by ladder and in a storage room by the monastery entrance. We documented the traditional methods of storage used following the performance.

Conservation Storage
For the Cham costumes, Treasure Caretaker Training (TCT) conservators were asked by the Tsum community leader Lama Pasang how to store the Cham attire so that it would last for future generations. Our conservation team worked closely with the community members as we together unpacked most of the costumes that had been put away six months previously after the annual Cham dance. The goal was to share safer storage methods in a low-cost and practical way, which is the approach of Treasure Caretaker Training. The video shows clean white cloth and polyester pillow stuffing, both of which came from fresh bed pillows purchased in Kathmandu that can be compressed for travel by pony or porter on the mountain trails, as they are lightweight and inexpensive.

The conservators demonstrated simple techniques like rolling instead of folding, stuffing the cloth and leather boots to keep their shape, and re-storage of the elaborate masks, robes and ritual objects carried by dancers. Videos and images show community members re-doing storage in this way, without further conservation input. We have created a video to demonstrate this, and we will be translating it into the languages of communities where Cham is practiced. *Fig. 8.*

Conclusion

This research, paper, and presentation depict textile conservation in a traditional and remote region when conservators are invited by the community for advice and hands-on work with community members on their traditional Cham dance treasures.

Acknowledgements

Gratitude to monastics, community members, scholars, and Treasure Caretaker Team members for informing this research, including: Dungse Lama Pema, Lama Pasang, Benchen Monastery Dance Masters Thinley Woser and Sonam Wangyal, Acharya Tenzin Norbu, Tsering Phuntsok Lama, Karen Greenwood, Sharon Lowen, Joseph Houseal, Tsering Tsumpa, Karma Deki, Larry Edwards, Craig Lewis, Aishwarya Mehta, Elisabeth Gold, Rochelle Weithorn, Gloria Jones and many others, and to our loyal and generous funders including Firebird Foundation for funding the Tsum Preservation Project, Khyentse Foundation for funding the video Tsumpa Cham, and to the Pema Chodron Foundation.

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1. *Tsum Monastery is located in remote Himalayas of Nepal.*

2. Cham costumes loaded in Kathmandu on helicopter to remote Tsum in high wind and rain. Cham Master supervises.

3. Dance Master assigns costumes to monastic and community dancers.

4. Tsumpa Cham rehearsals late into the night in Tsum Monastery courtyard.

5. Padmasambhava is main deity for this community and Dungse Lama Pema wears this costume and blesses community members in the rain.

6. Dancer Leaping and Twirling in the Pouring Rain

7. Wet Cham Attire drying in monastery courtyard

8. Treasure Caretaker Training Cham preservation video shows safer storage for robes, masks and boots.

Conservation Of A Standard Diving Dress Following Natural Disaster In Iceland

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Abstract

This paper outlines a project over the last two years to preserve a deteriorated standard diving dress belonging to the Technical Museum of East Iceland, highlighting the importance of the interaction between community and conservation work in areas impacted by natural disaster. The diving suit, originally displayed in the museum, suffered significant deterioration over time and was further damaged during a landslide in Seyðisfjörður in 2020. In 2022, students from the University of Lincoln completed a treatment plan, returning in 2023 to carry out the treatment. This was done working in association with the Reykjavik Tool Library and the National Museum of Iceland.

Throughout the conservation process, close attention was paid to the changing cultural and environmental context of the museum and the town. By addressing the suit's condition concerns and acknowledging the changing atmosphere of the town, this collaborative project not only contributed to the preservation of a valuable cultural artefact but also fostered a deeper understanding of the technological heritage of Seyðisfjörður and its continued role in showcasing the story of the museum and the impact of natural disasters on the town.

Introduction

This paper explores the conservation planning and treatments undertaken to preserve a standard diving dress belonging to a small museum in rural Iceland, which suffered damage in a recent landslide. It describes the practical challenges faced during the project and examines its impact on the local community.

The primary aim of the paper is to explore the interactions between heritage students and professionals with communities they work with. It discusses challenges experienced during the project in Seyðisfjörður and seeks to examine the complexities of balancing conflicting solutions to diverse community needs.

Project Background

Seyðisfjörður is a small town in the East Fjords of Iceland, an area of generally very low population. Historically it was a fishing village, but now relies on tourism and transport links. The town was the site of the first telegraph cable in Iceland, connecting it to the United Kingdom, laid in 1906 (Naval Intelligence Division, 1942). The port that was once used for fishing vessels is now host to a number of cruise ships, as well as the Icelandic terminus for a ferry running between Seyðisfjörður, the Faroe Islands and Denmark. Seyðisfjörður is located on a long fjord and enclosed by steep mountains on either side (Visit Seydisfjordur, n.d.). The Technical Museum of East Iceland (Icelandic: *Tækniminjasafn Austurlands*) is located in Seyðisfjörður, and houses collections based on the history of the town and its history of communications.

After several days of heavy rainfall, Seyðisfjörður experienced a landslide in December 2020 after a slab of earth from the nearby mountains was disturbed (Icelandic Met Office, 2021). This landslide was of unprecedented size and destroyed multiple buildings, which included several owned by the Technical Museum of East Iceland. There were fortunately no casualties, but important historic buildings and much of the collection of the museum had been lost (Hafstað, 2020). Figure 1 shows the condition of one of the more intact buildings of the museum in 2022. Alongside the material losses, it was evident upon staying in the town that there was emotional scarring and a sense of unease to the whole community, especially given that there was a possibility a similar event could reoccur (Iceland Monitor, 2023).

After the mudslide occurred, the museum staff spent months rescuing objects from the midst of mud, debris and silt and sorting those that could be salvaged into temporary storage spaces. This was achieved with assistance from the National Museum of Iceland (Icelandic: *Þjóðminjasafn Íslands*), who drew up a disposal policy with the Council of Museums (Akizu, 2022). This process had a heavy emotional impact on the museum staff, who not only lost the museum and a swathe of their town, but then had to trawl through the wreckage, repeatedly being reminded of the magnitude and catastrophe of the loss (Goljat, et al., 2022).

Iceland has no conservation training programmes of its own, so all its conservators must train elsewhere. This, along with a small overall population, contributes to a relative lack of heritage conservation skills within the country. There are a small number of conservators operating in Iceland, meaning that there were very few people with appropriate skills placed to aid the recovery efforts in Seyðisfjörður (NKF-Ísland, n.d.). The museum in Seyðisfjörður is small with limited assets, so this scarcity of skills and lack of financial and personnel resource added to the difficulties in managing the recovery and reopening of the museum. A group that did have applicable skills and that was able to find funding were a group of Icelandic students from the University of Iceland's Museum Studies course. Four of these

students arrived in Seyðisfjörður soon after the landslide to assist in recovery efforts, gather data, and build a website for the museum (Hafsteinsson, 2022).

In 2022 (around a year and a half after the initial landslide), a group of eight conservation students, including the author, from the University of Lincoln arrived in Seyðisfjörður in order to prepare a set of objects for the museum's first exhibition upon reopening. By this time the object recovery was complete, and the objects were largely housed in two storage facilities. The student placement was organised through Anna de Matos of the Reykjavik Tool Library, a conservator trained in the UK. This placement was also partially funded by the Anna Plowden Trust and through Turing Scheme grants, and the Zibby Garnett Travel Fellowship the following year.

A year later in 2023 the author returned to Iceland to continue conservation work on a standard diving dress belonging to the museum, again organised by Reykjavik Tool Library. This time work took place in the conservation laboratories of the National Museum of Iceland in Hafnarfjörður. This generous contribution allowed the use of analytical techniques and easier access for those working on it. Being outside of Seyðisfjörður also reduced difficulties in sourcing conservation materials, as well as avoiding the potential of the further impact of natural disasters, as Seyðisfjörður was still at risk of landslides and avalanches (Ciric, 2023).

Project Part I: Seyðisfjörður

As part of the work carried out in the first year of the project, a condition report and treatment plan of a standard diving dress was completed by the author and two other students. This diving suit had previously been on display in the Technical Museum, but had been partially pulled from its original display location and damaged during the mudslide. The rubber elements of the suit had also deteriorated after many years of display. Before the disaster, it had been displayed on a fibreglass mannequin, with its helmet, diving shoes, weight and belt all present. The suit and mannequin were suspended from the ceiling with string (some of which then snapped in the later landslide). The mannequin had a non-original knife in one hand, a net suspended from a screw in the other, and a hose was connected to the belt in the back of the suit. The diving suit was on a wooden pallet in cold storage during the time of the student placement, along with its hoses and pump that allowed the wearer to breathe. The standard diving dress as it was stored at this time is shown in Figure 2.

This object was chosen for treatment out of the thousands in the care of the museum as it was one of the most recognisable and familiar objects in the collection. Upon speaking with members of the local community, the diving suit was clearly a beloved fixture of the museum (Technical Museum of East Iceland, 2022). Conserving this object so that it could

be returned to display could therefore contribute a sense of continuity and normality that Seyðisfjörður was sorely missing in the wake of the disaster. The diving dress represents the port town history of Seyðisfjörður via its previous use in ship repair, and its tourism-driven present as a museum attraction.

Researching the object proved difficult, as most of the museum's paperwork had been lost. It was also difficult to obtain information from the museum staff, as there was only small number employed by the museum, and they had many demands on their time. This lack of communication throughout the conservation project caused a number of issues, ranging from difficulties in logistics to a lack of a good working relationship. This certainly made it more challenging to understand the context of the work being carried out and did not encourage a joint understanding of the aims of the project between all parties.

The trauma experienced by the community, and the museum staff in particular, added to these communication difficulties. It was difficult to balance suggestions on how to improve the collection's storage against trying not to appear overly critical, given how difficult the situation immediately after the landslide had been. We struggled to achieve this, as although the museum had done a vast amount of work in a relatively short time span and achieved the most they could with the resources at their disposal, there was still significant work yet to be done. It was significantly simpler for those without prior experience of this kind of natural disaster to give advice than it was for those directly impacted to enact it, which was a further cause of friction.

The treatment proposal was written under the assumption that the work would be carried out by students during another summer project in a year's time, and that the diving suit would eventually return to display in a new building. It included a proposed method of removal of the mannequin inside the suit, the cleaning of the suit and accessories, and a proposition for its future display and preventive measures. It was somewhat difficult to create a treatment proposal without a future student placement being firmly in place, and without knowing whether the work would take place in Seyðisfjörður or Reykjavik. The limited direct communication with the museum also complicated this process, as a future display solution would require significant input from the museum as they would have a better idea of what resources they would have available and what the people of Seyðisfjörður would likely expect.

Project Part 2: Reykjavik

In June 2023, the author returned to Iceland to carry out the conservation treatment of the standard diving dress. This time, the work would be centred entirely on the suit, and would take place in Hafnarfjörður (a town in the Greater Reykjavik area). The Reykjavik area was chosen rather than returning to Seyðisfjörður for a number of reasons. This included the

increased ability to find temporary accommodation, which had proven difficult in the previous year, and proximity to the Reykjavik Tool Library, where Anna de Matos is based. The risks of staying in Seyðisfjörður had also once again increased, with an elevated risk of avalanches at this time (Ciric, 2023). The number of students had also been reduced in order to put less strain on the available resources of housing and funding.

The diving dress, including the shoes, weight, belt, and helmet, were transported from Seyðisfjörður to the laboratories of the National Museum of Iceland. Once there, the suit was unpacked and each of the accessories removed from the main body of the suit and stored separately to allow access for treatment, as seen in Figure 3. The main textile of the suit was then cleaned using stiff brushes to remove dried mud, and the friable areas of rubber consolidated.

It had been planned to remove the mannequin from the suit, as there was a concern that the rubber would adhere to it in the future. This had already begun to happen in the areas exposed to light. However, upon x-raying the suit, it was found that the damage to the rubber inside of the suit was less extensive than previously thought. Due to the reduction of flexibility in the rubber, it was determined that it would not be possible to remove the torso of the mannequin safely. Instead, the hands and head of the mannequin were removed to avoid adhesion of the suit in these more exposed areas. This would also improve the visual appeal of the object, given the generally poor reception to the condition and appearance of the mannequin. The inside of the suit cuffs and the neck opening were then covered with unbleached canvas and Melinex® polyester sheeting to avoid pest ingress and further adhesion of the suit and mannequin. The suit after treatment was completed is shown in Figure 4, which is taken from a three-dimensional scan of the object.

Unfortunately, due to time constraints, only the textile and rubber body of the suit was able to be treated during this phase of the project, with the other items of the diving dress still requiring treatment. The textile was returned to Seyðisfjörður for future display, with the other pieces remaining in Hafnarfjörður for future treatment. The removed sections of the mannequin were also returned to Seyðisfjörður, as although not part of the original object, they also narrate the story of the museum, the landslide, and the town's regeneration in their own right.

The distance from Seyðisfjörður certainly impacted the way this portion of the project interacted with its community. The communication difficulties previously experienced between students and the museum were again an issue, with all communication going through the Tool Library rather than directly between the museum and student. However, the work taking place outside of Seyðisfjörður greatly reduced the burden on the museum and the community as a whole, as there was no longer the pressure to find a suitable work area, accommodation or materials within the town and less pressure on their limited available time to supervise work, thus allowing them to prioritise other necessary projects.

With conservation taking place outside of the East Fjords, the work then also became less visible to the community, who were then less aware that there was a willingness from outside of Seyðisfjörður to provide aid, albeit in a small role. It also became less possible to talk with the community about the work or to gain an insight to their wishes or experiences that could help inform the treatment. However, the Technical Museum of East Iceland posted updates on the diving suit to their social media so that the community had an understanding of the work that had been carried out.

Discussion

It must be noted that this paper is written from the viewpoint of a UK conservation student who took part in two short placements. It is therefore limited in scope and only reflects the experiences of one group of people involved in the project. The other stakeholders in the project and members of the community of Seyðisfjörður doubtlessly have their own views on the interaction between conservation and their community.

The conservation of the textile came partway to achieving the goal of providing the museum with a popular object suitable for display for its reopening. There is still work to be done in conserving the other parts of the suit and creating an appropriate display method for the object. Some shortcomings of the project were that in the first year, there was excess pressure put on the time and resources of the museum and therefore on the stress levels of staff. This was then partially resolved in the second year by somewhat scaling back the scope of the project.

Ultimately, the conservation of the objects in Seyðisfjörður was not simply a matter of having the appropriate heritage skills. Understanding the overwhelming trauma of the events, the context of the museum within the town and the rapidity of the changes to life in this area were also key. It was these less tangible skills that hindered the project's effectiveness, as it would be almost impossible to people from outside of Seyðisfjörður, especially outside of Iceland, to truly grasp the feelings of the community in such a short time span. However, as there are a very limited number of people in Iceland with conservation skills, it would be exceedingly difficult to source local conservators with the resources at the museum's disposal.

Seyðisfjörður was not the only community impacted by these events. Multiple groups of students, from Iceland and beyond, went to assist with the salvage mission and museum reopening. A small silver lining of these events is that these students have gained many new skills that they can use to help other museums in the future. Museums on a wider scale, both in Iceland and beyond, can also learn from the events that unfolded in Seyðisfjörður, which is certainly a lesson in how climate impacts museums, and the importance of disaster planning.

Conclusion

From this experience, it can be seen that balancing the needs of communities with available resources can be challenging, particularly after a natural disaster or in an isolated area. The importance of appreciating cultural differences also must not be overlooked, not only in terms of differences from country to country, but also the variances between different towns or institutions. In this case there were multiple communities involved, the town of Seyðisfjörður and groups of emerging heritage professionals, all of whom were affected by the work.

The project still has several steps before it is completed. The treatment of the remaining sections of the standard diving dress will be treated either by Anna de Matos of the Reykjavik Tool Library or during future placements. Though incomplete, this is likely to be less time intensive than the main section of the suit. The final stage of the suit's journey will when it is returned to display in Seyðisfjörður once the planned new museum building is completed.

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Figure 1: One of the buildings of the Technical Museum of East Iceland in June 2022, after being damaged by the landslide. This is the part of the museum still standing, with another section being almost completely demolished.

Figure 2: The diving dress as it was stored in 2022 (before conservation work commenced), with other pieces of associated equipment.

Figure 3: The diving dress in 2023, after arrival at the National Museum of Iceland. The mannequin inside the suit can also be seen.

Figure 4: A still from a three-dimensional model of the suit created after treatment of the textile portion of the suit was completed.

By Land, Boat and Small Plane: Taking Textile Conservation Outreach to Alaskan Communities

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Introduction

Alaska's museums and cultural centres stretch from Utqiaġvik, the northernmost city of the United States of America, to Ketchikan along Alaska's southeastern coast, and from Eagle on the south bank of the Yukon River, near the Canada–US border, to Unalaska located in the Aleutian Islands 1200 miles from the Alaska Peninsula. They tell the history of Alaska, protect cultural treasures, and enrich communities. Also, they act as community centres, event spaces, learning hubs, and essential economic systems for their cities and the State.

There are approximately one hundred museums and cultural centres in Alaska. Cultural heritage and history are at risk unless museums in older buildings, renovate or construct new buildings. More than half of Alaska's museums and cultural centres anticipate undertaking major capital improvement projects in the next five years. Further to improved infrastructure there is a great need for access to professional support and training.

Since 2021 Interwoven Fibers LLC, an Alaskan-based conservation business, has predominately worked on projects with community input and engagement. Museums and cultural centres collaborated with include: Alaska Native Heritage Centre, Anchorage; Aleutian Pribilof Islands Association, Inc. (APIA), Anchorage; Aunt Claudia's Doll Museum, Juneau; Eagle Historical Society and Museums, Eagle; Sitka National Historical Park, Sitka; Haines Sheldon Museum, Haines; Resurrection Bay Historical Society, Seward; and Sealaska Heritage Institute, Juneau.

Projects were collection-focused, often responding to the immediate needs of the museum community in Alaska. Collections management and preservation were enhanced through professional conservation expertise, training, and access to collections care supplies. Essential support was provided. This ranged from documentation and conservation, to re-storage and exhibit display. Project focus varied depending on the collection and institution priorities. A variety of textiles and ethnographic materials were worked on, such as:

- Weave analysis of finely woven baskets from the Aleutian Islands.
- Structural support to damaged woven spruce root headwear.
- Stabilization to extensive tears in fur clothing.
- Exhibit display preparations of Chilkat woven robes.

- Pest mitigation on a large collection of Northern Indigenous dolls, made from rare dollmaking materials such as fish skin or coiled grass.

Collections-Focused Projects

This paper highlights four projects, each of which demonstrates treatment, preventative care, storage, exhibits, training or a combination of the above. They were grant-funded projects supported by the Collections Management Fund (CMF). The CMF grant was established in 2013, funded by Rasmuson Foundation and managed by Museums Alaska. This state-wide professional association acts as a clearinghouse for information about Alaska's cultural institutions and their activities. It also advocates for museums at state and national levels, develops opportunities and resources for professional education, and maintains the innovative grant programs.

Seward, Alaska

Resurrection Bay Historical Society's (RBHS) mission is to collect, preserve and make accessible to the public, materials that help establish and illustrate the history of the Seward area. After formally incorporating in 1965 RBHS received many items, including a major donation of Alaska Native artifacts from former Seward resident Selma McDonald. Seward Museum officially opened its doors on April 29, 1966 to display and store its ever-growing collection of objects, photographs and archives, which is now housed in the museum portion of the Seward Community Library & Museum.

In 2022, RBHS was awarded a CMF grant to undertake conservation on a pair of knee-high fur mukluks (boots). The mukluks originally belonged to, and were donated to RBHS by, dog musher Dan Seavey. They are significant as they were worn in the 1974 Iditarod race. They are made of reindeer calfskin fur, seal skin, wool felt, cotton fabric, and feature decorative details of wool yarn, and are sewn with cotton and sinew thread.

Overall project work consisted of:

- Documentation, including photography, condition assessment, treatment report, display and storage recommendations.
- Stabilization treatment.
- Construction of internal supports.
- Project management, including overseeing the commission of display mounts.
- Exhibit installation.
- Provision of a two-day collections-care workshop.

Conservation treatment was undertaken in the Anchorage-based studio of Interwoven Fibers LLC. Treatment involved: surface cleaning using dry methods, re-shaping, and stabilization to tears in the skins. After stabilization the mukluks were packed for transportation back to Seward. They were installed in the re-designed *Iditarod Race and Trail* exhibit, alongside Dan

Seavey's race bib and fur lined, cotton kuspuk (hooded over-shirt), which were conserved and re-installed the previous year.

In addition to conservation treatment, a two-day workshop was presented on the care of clothing, with a focus on fur and textiles, and other fibre-based collections. The museum curator, four members of the RBHS, and staff of Seward Community Library Association were in attendance. Participants were introduced to conservation concerns and preservation techniques. The group completed condition assessments; reviewed surface cleaning options; discussed identification and labelling choices; and evaluated storage options.

Hands-on sessions covered: examination and surface cleaning of textiles, using a reference collection belonging to Interwoven Fibers LLC; packing, construction of padded hangers, and soft supports for storage. During the second day of the workshop a number of RBHS's collection items were examined, and recommendations were made for improvement of storage and treatment procedures.

Seward is located on Resurrection Bay, a fjord of the Gulf of Alaska on the Kenai Peninsula. Situated on Alaska's southern coast, approximately one hundred and twenty miles by road from Alaska's largest city, Anchorage. Travel for this project involved the short two-and half-hour drive from Anchorage.

Juneau, Alaska

Sealaska Heritage Institute (SHI) is a private non-profit, founded in 1980 to perpetuate and enhance Tlingit, Haida and Tsimshian cultures of Southeast Alaska. SHI curates year-round museum exhibits and offers numerous public programs promoting Southeast Alaska Native culture, language, and art, including Celebration, Alaska's second-largest Native gathering. SHI serves as a central repository for Southeast Alaskan Native art. It now houses an expanding collection of over 950 art and ethnographic objects. In 2021, two major collections were donated. This, as well as other donations throughout the Covid pandemic, when staff were encouraged to work from home, created a backlog in finding adequate storage.

SHI's textile collection includes button blankets and Chilkat robes. Button blankets of wool fabric often have a prominent crest displayed on the wearer's back, decorated using buttons made of shell and/or plastic, and glass beads. A previous CMF grant, awarded in 2011, enabled the conservator to undertake condition inspections, assessments and treatment proposals for the larger donation of button blankets, tunics and other regalia. Collections care training and recommendations for continued preservation care were provided to the Collections Manager. During this time the under-utilized rolled storage units were brought to SHI's attention.

In 2023, SHI was awarded another grant to improve capacity and storage for the flat textile collection. This included an assessment of the textiles and more specialist training to SHI's Collections Manager and summer museum intern (Figure 1). After the textiles were assessed, a selection deemed safe for rolling was processed and positioned on the under-utilized suspension unit. Hands-on training was provided throughout the stages. The importance of

preparation of supplies and designated workspace, decision-making, and selection rationale were also fully explained. A ‘How to' guide on textile storage options was compiled for future use and staff guidance.

Eight participants, predominately Chilkat weavers, attended a one-day workshop on the care of regalia and textiles. A PowerPoint slide show was presented on the agents of deterioration, preventive conservation specifically pest mitigation, handling, storage, surface cleaning, and exhibit display considerations. Ethics, rationale, supplies and techniques were discussed. There were demonstrations and hands-on activities covering various storage options: boxes, padding, fabric sausage supports, padded hangers, soft internal storage mounts, fabric covered padded boards, and rolling textiles. Participants were encouraged to ask questions pertaining to their own textiles and collections, with adequate time for everyone to make a soft support sausage to take home for use with their own woven robes.

Although being the capital, Juneau is unique in that access is only possible via air or sea. The absence of a road network is due to the extremely rugged terrain surrounding the city. Juneau is connected by a ferry system, and there are two direct flights every day between Anchorage and Juneau. Travel for this project involved the one hour and forty minutes flight from Anchorage.

Eagle, Alaska

In 1961, the Eagle Historical Society and Museums (EHS&M) was established and works to preserve the buildings, items, documents, and photographs of historic Eagle. The town is on the south bank of the Yukon River near the US-Canada border. Although the road system connects Anchorage to Eagle, the journey takes over thirteen hours, with the last ninety-five miles driving on rough gravel road. Travel for this project was a short, one-hour flight heading north from Anchorage to Fairbanks, then travel on a small Cessna Grand Caravan plane from Fairbanks, heading east to Eagle (Figure 2).

Work commenced with the deinstallation of two moosehide drapes and eight textiles - an ecclesiastical robe and sash, three lectern runners, large altar cloths and a large textile hanging, from display in the historic St. Paul’s Mission Church. The drapes and textiles were photographed, documented, condition assessed, and cleaned in preparation for storage. After many years on open display, surface cleaning was a time-consuming but necessary phase. They were rehoused using archival storage supplies and stored in another location while urgent structural work is carried out on the church.

The main focus of the project was conservation of the two unique moosehide drapes. Each drape consists of six large sections of tanned moosehide with numerous cut fringes, pieced together with metal rivets to form one large piece. The design on each moosehide section was applied using the technique of pyrography, where the designs were burned in the tanned moosehide. Pyrography was a popular art technique in the Alaskan interior in the early years of twentieth century.

The project included outreach and significant community involvement. There was a presentation on care and preservation of family heirlooms, including: baskets, textiles, fur, and beadwork. Followed by a hands-on workshop on the care of skins, leathers, and hide. Both presentation and workshop were open to EHS&M volunteers and the wider community. This allowed for plenty of sharing of preservation processes and discussions around decision rationale. Conservation ethics were explained such as: retaining evidence of use, reversibility of treatments, and the need to document throughout. During the workshop, and subsequently after training, members of the community helped to move the large moosehide drapes, make storage supports, and surface cleaned one of the moosehide drapes (Figure 3). This provided the opportunity for continued preservation, collections care training, and community outreach.

Several locations around Eagle, where collection items are housed, were assessed and inspected for potential new display locations. Treatment reports were produced with recommendations of appropriate maintenance and exhibit display actions. Further conservation treatment priorities were identified with estimated treatment hours. Overall observations were noted in an assessment summary report, specifically focusing on the exhibited textile and clothing collection. Recommendations for continued preservation actions were made.

Haines, Alaska

The Haines Sheldon Museum (HSM) is an educational institution of the Haines Borough, committed to collecting, preserving and interpreting the history, art and diverse cultures within the Chilkat Valley region. The museum houses over four thousand artifacts. The HSM facility is forty-two years old and over time changes were made to the original design. A humidifier was installed about twenty years ago adding moisture in low-humidity seasons, but not removing excessive humidity at other times of the year. Moreover, intermittently this unit was inoperable. Although the HSM's environmental monitoring system was active, HSM was without a museum professional for over two years. The immediate priority was to repair the current humidifier, this was done promptly and is now fully operational.

Interwoven Fibers LLC, was contracted in 2023 to provide a facility environmental evaluation to ascertain whether humidity and light conditions are causing damage to the museum's collection. The first on-site visit included an initial on-site conservation-oriented review of the collection spaces, equipment, supplies and work area available for this project. Various collection items in storage and exhibit were inspected, covering different material types, to check if there were signs of condition changes caused by environmental factors, and to what extent. Condition issues of concern were mould, tears, skin shrinkage, and glass disease caused by changes in temperature and relative humidity. Observations were recorded in a summary report with recommendations of appropriate maintenance and actions to improve environmental conditions; and identification of conservation needs and priorities for continued preservation actions.

In addition, training, and professional advice was given to the museum's Collections Manager, through demonstrations and discussions on:

- Preventive conservation, to help reduce potential future damage.
- Techniques for care, including object inspection, condition issues, and surface cleaning collection items.
- Exhibit cleaning, for routine care to protect all the collections.

During this time cleaning methods and approaches, were demonstrated, and training sessions supervised while museum staff surface cleaned objects. Throughout each step of the project the decision-making process and rationale were shared. Preventive measures for environment, Integrated Pest Management, light levels, exhibit display, and cleaning of oversized and open display collection items were discussed.

The second on-site visit focused on the most valuable collection items, namely Chilkat woven robes. Chilkat weaving is a traditional form of weaving practiced by Tlingit, Haida, Tsimshian. The process is very complex and unique in that the weaver can create curvilinear and circular forms within the weave itself. Traditionally, mountain goat wool and yellow cedar bark are used. Nowadays, as mountain goat wool is harder to harvest, merino wool is used as an alternative. The museum's robes were inspected and surface cleaned, and new display hanging mechanisms were constructed and hand-sewn to the tops of the robes, for even distribution of weight during future display (Figure 4). Weavers have said that older textiles of button blankets and Chilkat robes are culturally important and need to be documented and preserved for study by contemporary weavers and regalia makers.

The project concluded with a one-day workshop on Care and Preservation of Textiles and Regalia for the Klukwan community, outside of Haines, specifically focused towards weavers (Figure 5). Preparation included a PowerPoint presentation, providing handouts, supplies and goodie bags for workshop participants, and supplies for use during workshop demonstrations.

Haines is connected to Anchorage via Canada by road system. The journey is over fourteen hours with a large portion being riddled with large pot holes. The first on-site visit was by road, traveling through the beautiful Fall colours. The second on-site trip, being in the winter required an alternative method. Travel involved flying from Anchorage to Juneau, then a four-and half-hour relaxing ferry ride to Haines.

Project Benefits

There have been numerous beneficial outcomes from the highlighted projects for the museums and cultural centres, and communities, that came about because conservation took place. They include:

- Provided adequate support and proper housing for culturally significant textiles.
- Enabled more space for incoming regalia and textiles in existing storage cabinets.

- Prepared textiles for exhibit display using supportive methods.
- Created condition reports for textiles and items of clothing, where no or limited condition assessments were previously undertaken.
- Completed the processing, preservation, and storage of collections to ensure they may be used in research, education purposes, and future exhibit efforts for museum staff, artists, communities, and researchers.
- Wrote and disseminated How-to guides on textile preservation to workshop participants and Museums Alaska at the conclusion of projects.
- Increased the knowledge of staff and volunteers working in Alaska's museums and culture centres, and helped develop collections care skills on writing condition reports, condition assessments, and surface cleaning textiles.
- Helped train the next generation, specifically working with Alaska Native staff and interns, with limited access to conservation training.
- Provided museum staff, interns and artists direct access to copies of literature on conservation related topics and museum collections information during workshops and training sessions.

Working with communities during these projects has also benefited the museums and cultural centres, and conservator. Fostering engrossing information exchange and shared practices for the preservation and care of collections between local community members including makers, artists, owners and users of cultural items, conservator and other museum professionals.

Artists often discuss traditional care practices and share technical knowledge of physical properties of the materials, processes, and cultural significance with conservators. Understanding the processes of manufacture, allows the conservator to better understand how objects are made, the likely sources of deterioration, and helps the conservator make better choices for treatment and storage.

Lessons Learned

Each project involved specific tasks to be achieved within the budgeted timeframe. Often this was a lot of work to fit into the schedule, with no room for flexibility or extension if circumstances changed. On-site projects however, can also create focused time for the conservator where additional work can be completed within the grant timeframe.

Costs of supplies, shipping, travel, accommodation, ground transportation, and per diem are normally included in the project's grant budget. Alaska being land-locked with Canada means that shipping costs can be equivalent to, if not more than, the supplies ordered. Institutions contribute towards the costs with staff time, airmiles, equipment, and/or supplies costs for continued on-site collections care. Interwoven Fibers LLC provides workshop participants with handouts and goodie bags containing small supplies. But there is no contingency in the grant-funding budget if more supplies are required, shipping costs increase, or travel plans change and subsequently the costs increase.

There have been situations when costs of mileage, rental car, and workshop supplies have been incurred by the conservator due to a change in circumstance. To avoid these additional expenses more time is now spent calculating the grant costings. Not having other sources of funding to purchase additional supplies has meant having to think more creatively in situations. Working on projects in remote communities or places hard to travel to, it has been advantageous to break the project into two on-site visits in order to plan for any unforeseen situations. Some communities cannot easily get access to suitable collections care supplies. The first on-site visit provides the opportunity to re-organize and prepare workspace; measure storage box and mount sizes; and carefully plan, order and prepare any required archival supplies. Specific tasks can also be scheduled for the second trip, subsequently making the second on-site visit more efficient.

Travel logistics, such as road conditions, weather, and natural disasters also need to be considered. Towards the end of the Seward project the conservator, her dad and dog, were stranded following a landslide across the only road out of town. Extended accommodation and new travel arrangements were made. A water taxi ride to bypass the landslide, and an Anchorage friend to pick up at the boat launch ramp to take everyone and all the work supplies back to Anchorage (Figure 6). All the while leaving the car stuck awaiting the road reopening. Even with the inconvenience it was sunny, gorgeous scenery, and so there were no complaints. When undertaking outreach conservation projects, it is important to keep a sense of adventure, especially in Alaska, and make the most of the situation. Projects are now planned with several days/weeks in-between just in case the unexpected happens.

In earlier workshops a reference collection of textiles and related objects, belonging to Interwoven Fibers LLC, was used to teach untrained and trained collection staff. Projects now focus on training staff, interns, and volunteers while working on the institution's collection items. This provides more meaning, relevance, and a deeper connection, particularly when working with indigenous groups and their material culture.

Reflection

As the projects have evolved over the years, so has the structure. Starting as a small outreach component to larger conservation and exhibit projects, evolving into multiple training sessions specifically to Indigenous collections staff and interns, and holding various workshops in the related communities. Projects have developed through experience and evaluation of what has worked and what could be improved. Each project is carefully moulded to each institution's and museum staff's needs, with further changes to the project structure occurring once on-site.

The size of institution, location, available resources, access, staff, and budget constraints are all factors to be considered. In Alaska, the time of year is extremely important. Avoiding harsh winter months but also in most communities avoiding times of subsistence harvesting and hunting is a necessity. This can make the timeframe very restricted. In Eagle many contributing factors meant there was only a two-month window in the year when the project could happen.

Challenges arising from different projects can be frustrating but can also increase the project accomplishments. During the on-site visits in Eagle, members of the community were informed of the project, and met frequently with the conservator to establish how they could contribute. Community assistance included: using a sewing machine; hand-sewing proficiently; providing exhibit supplies; travel to collect and purchase additional supplies; and providing a suitable space to hold the presentation. Community help and involvement was a major reason this project was such a success.

Collections managers, curators, volunteers, interns, museum visitors, and weavers have participated in the projects alongside the conservator. An environment is generated that enables conservator and museum staff to share their expertise, concerns, and recommendations. Local Alaska Native artists, community members, museum visitors, and staff from other collecting institutions have all benefited from being involved in the projects and from exposure to the shared knowledge. This often created a renewed enthusiasm for collections care.

Workshop participants are encouraged to fill in a workshop survey at the end. The responses have influenced future approaches to undertaking conservation projects and how best to share knowledge and techniques for the preservation of collections. From feedback written, verbal, and through observations further training sessions are being developed by Interwoven Fibers LLC. These sessions will build upon preservation and collections care training already given.

One-on-one training has proved to be the most successful with participants, who found that method of teaching more suitable (Figure 7). Outreach components, where techniques are demonstrated and there are hands-on activities are effective teaching methods. It is clear that participants appreciate the direct access to a conservator, handling materials, and opportunities to ask questions. One-on-one training can create an environment similar to that of learning in the community. The communal, sharing atmosphere is reminiscent of learning at home from a parent, grandparent or an elder. Observations of project participant's manual dexterity, aptitude, and desire for further practical knowledge, gives confidence to share more complex collections care and conservation processes. This will undoubtedly assist communities in future preservation endeavours.

Conclusion

The size and mission of the museum or collecting institution, their location within Alaska, and the available resources were significant contributing factors to the focus, planning and completion of the projects. An understanding of logistics and human factors involved in conservation focused outreach is essential for successful outcomes. Factors worth considering are: everyone's expectations, varied personalities, cultural sensitivity, working methods, information gathering, and post project data management.

Participants of the workshops and training sessions in the communities are always enthusiastic about the chance to learn and share methods of care for treasured materials and artforms.

Outreach provides the opportunity to connect with each other and builds long lasting connections, helping to break down some barriers, and creating relationships for future conversations (Figure 8). This work is helping to protect, preserve, and share Alaska's treasured collections, and to help keep and care for them in Alaska.

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Fig 1: SHI's Collections Manager and intern rolling a button blanket for storage.

Fig 2: Small Cessna Grand Caravan plane for travel from Fairbanks to Eagle.

Fig 3: Members of Eagle community cleaning moosehide drape and making a support.

Fig 4: Inspection, surface cleaning and exhibit preparation of robe collection in Haines.

Fig 5: Weavers from Klukwan community making soft supports for robes during workshop.

Fig 6: Workshop supplies on beach, awaiting water taxi ride due to landslide in Seward.

Fig 7: Training provided on condition assessments and surface cleaning collection objects.

Fig 8: Weavers and museum staff from Juneau community at end of workshop.

Conserving participatory art in Southeast Asia: a case study of Sutee Kunavichayanot's participatory artwork, *Elephant Breath (Collecting)*

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Abstract

Participatory art emerged as a significant artistic practice within the S/E Asia geographic region from the 1970's, critically engaging the public in complex social and political discourse through artistic objects. Thai artist Sutee Kunavichayanot's participatory artwork, *Elephant Breath (Collecting)*, is a latex and textile artwork, cumulatively inflated by the breath of the community. When filled with air the elephant is full and buoyant and when deflated the artwork appears tired and worn. Created following the Asian financial crisis in 1997, the artwork uses familiar regional forms and materials to actively transmit ideas through community engagement.

Revisiting this contemporary artwork 20 years since its creation, challenges to the participatory mechanisms are apparent. The degraded, hardened latex limits inflation, while the recent Covid-19 pandemic has amplified the risk of air borne viruses as straws and shared breathing tubes are used to communally inflate the elephant. Even with mediating these effects, the pandemic has shifted the public's perception of breath and shared breath, complicating the transmission of meaning.

This research explores the many changes, both material and immaterial, that shape an artwork's social connections with a viewing audience. Participatory art conservation is conceptualised as an ongoing and dynamic process of interpretation between museum and artist, with the artist's intent providing a guiding principle for audience participation and collection care. In working with *Elephant Breath (Collecting)* interdisciplinary efforts, artist discussions, scientific analysis and an awareness of social context guided our actions to consider and evaluate the ongoing care of this significant artwork.

Introduction

Within South-East Asia, participatory art practices flourished during the 1990s and many examples appear within the Singapore National Collection. A collection care project begun in 2022 to survey performance artworks within the National Collection identified 10 artworks with participatory features. Within this survey, Thai artist Sutee Kunavichayanont's participatory textile and latex artwork *Elephant Breath (Collecting)* [fig. 1] was identified as an artwork that required care and further research, being of significance to the collection, minimally documented and made from vulnerable materials.

Described as relational, activist or antagonistic (Kelly 2014), participatory arts value is often judged by its ability to engage, transform or challenge – with the participant or collective in some

way altered or made aware through the interaction (Bishop 2006). As such, participatory art is often political and may have particular significance in environments where political comment, public assembly or media may be restricted (Teh 2017, Lenzi 2011). The rapid socio-economic and political changes within the S/E Asia region during the 1990s – including effects from colonisation, globalisation and environmental destruction - have been described as setting the tone for socially engaged art practices to emerge (Yun and Tan 2023, Lenzi 2014).

Participatory practices have variably been described as having delegated or pluralistic authorship (Bishop 2006, Gordon 2016), recognising the communities' role in actively co-creating or completing the artwork to varying degrees. In this way there is a distinction between participatory art and interactive art. Interactive artworks require an individual to activate the artwork in a predetermined manner whereas participation for the purposes of distinction, is an action dependant on a social form of organisation and produces social meaning and social effects (Amann 2023). Participatory art is not without its critics, who highlight the potential of co-opting individuals or communities (Cook 2002) or having an ethical ambivalence to issues of labour throughout the creative process (Bala 2018).

Within conservation, conflicts may arise in approaches for participatory artworks. For example, the preservation of materials versus the preservation of use, or the preservation of the participatory feature without the specific social context that provides the social meaning and social effects. *Elephant Breath (Collecting)* required us to clearly think through what participation meant, and how this might relate to the materiality and the material agency of the artwork – could the material latex still afford the collaborative effort intended by the artist? And could this be enacted twenty years later in a changed social and post-pandemic world?

This research extended our awareness of participation in relation to conservation, and in particular the nature of the participatory relationship between the artwork and the social viewer. In the case of *Elephant Breath (Collecting)* defining the relational qualities of the artwork, including 'closeness' and 'collaborative effort' and thinking through how these qualities were afforded through the materials of the artwork guided our conservation approaches.

Elephant Breath (Collecting), Art Historical Context

Elephant Breath (Collecting) is a participatory artwork consisting of a latex impregnated cotton 'skin' in the shape of a life-size elephant. Extending from the Elephant are six hoses connected to internal air cushions, through which the audience breathes and inflates the elephant. Through this communal 'breath donation' (Kunavichayanont n.d), the elephant becomes inflated and full, in contrast to its deflated and flat form.

Elephant Breath (Collecting) was created in 1998, at the height of the Asian financial crisis. With the collapse of the Thai baht in 1997, rapid unemployment and a reduction in services funding led to social and political consequences felt across Thailand and the region (Sussangkarn, Flatters and Kittiprapas 1999). Commentators at the time regarded the situation as an indictment of Thailand's over-reliance on Western economic principles, and, as a symbol of Thailand, the Elephant deflated was analogous to the empty shell of inflated expectations (Singapore

collection database n.d). The artwork is part of Kunavichanayanot's *Depletion-Inflation* series (1997-2000) regionally familiar forms, such as water buffalo and tigers, symbolise aspects of Thai life in the process of 'disappearing'. The use of latex, a regionally familiar everyday material resonates with this Thai-identification.

The Singapore Art Museum acquired *Elephant Breath (Collecting)* in 1998. The acquisition included the latex and cotton elephant, pillow, 6 vinyl airbags and hoses, wooden stools, metal stands, a lampshade, straws and bowls, and a hand-drawn 11pg installation manual detailing the assembly and operation of the artwork.

Material assessment

Our initial assessment included removing the artwork from a non-archival box, where we found the elephant folded into a small package, interleaved with Mylar®, and emitting a strong rubber odour.

The latex-textile was flexible, and the skin-like feel of the latex combined with the wrinkled relief surface gave a realistic effect of elephant skin. Kunavichayanont (per coms 2023) describes casting the Elephant from a life size model of an elephant from the Bangkok Zoo. Liquid latex was brushed over strips of cloth with the latex layer removed from the model by cutting through the underneath of the body and legs, peeling the skin off, turning it inside out and sewing the join with needle and thread.

Areas of latex delamination and loss are predominantly around the ears, head and tail where the latex appears thinner and may have experienced folding of the extremities during storage and transport, exacerbating crack formation and exposing the latex to further deterioration.

The latex showed advanced deterioration in the feet, with dark orange discolouration and severe hardening, with earlier stages of deterioration noted on the trunk. The deterioration mechanism of natural latex (polyisoprene) is widely known in conservation, and is primarily via oxidation, accelerated by UV radiation, light, heat, and various additives including metals and oils (Krieg, Mazzon and Gomez-Sanchez 2022). The cause of the localised area of hardening was unknown, although could be attributed to contaminants, such as oils from the original mould, becoming concentrated at the lower extremities of trunk and feet, by the movement and pooling of the latex.

Dirt and paint accretions were noted on the surface, predominantly on one side, presumably from being in direct contact with the floor.

Secondary documents

To understand the artwork's history and participant interactions, we sought texts and visual documents. Across South-East Asia, archival collections have developed within recent years[1], although historically, successive economic or political upheaval in many places and hot and humid climates have limited the collection of archival material (Taylor 2022). As such, instead of archival resources, published texts, catalogues and websites were consulted to build a cultural biography of the artwork, focusing on its interactions and displays. Images of the artwork, and others in the series, were captured in various states of being inflated by groups of people, or partially inflated or completely deflated [fig. 2]. The display of the *inflation-deflation* series occurred in both public sites and galleries, demonstrating the social nature of the artworks [fig. 3].

Various sources articulated inflation *and* deflation as important qualities of the artwork. In a 2001 interview Kunavichayanont described the display of the Elephant inflated and deflated as continuums of the artwork. 'Following the *Siamese White Elephants decay series*, I became interested in the process of decay, especially the 'withering process'. It finally led to the 'Yub Noh Pong Noh' series [inflate and deflate] that began in 1997. Viewer's participation in the form of blowing air into the silicone works is like a donation of breath. The significance of this activity probably lies in the revival of things that have disappeared or are disappearing, and also in according to equal weight to both deflating and inflating acts' (Kunavichayanont 2001 in Mukdamanee 2002).

Participant experience was found in two written documents, one by curator Apinan Poshyananda, who describes the continual deflation of the elephant as a 'nightmare', as the 'dream' of the elephant is over as it rises and falls unable to stay inflated despite multiple attempts (Poshyanada 2000 in Panmongkol 2000). Leena Chong (2001 pg.5) describes the embodied effort required to inflate the *Baby Elephant series,* a smaller elephant with only one hose: 'One would certainly know that breathless feeling after spending more than an hour blowing one up, only to see it deflate into a rubbery mass after 15 minutes; making it clear that it takes more than a lot of effort to revive the metaphorically dying…'

The used, aged breathing tubes and air cushions presented health risks to conservators, and we were unable to experience donating breath to the artwork – an approach used within performance conservation where the conservator may create documentation or embodied knowledge from the encounter (Marcal 2016). By partially delegating authorship of the artwork to those participating - who have the agency in this case to bring the elephant back to life- creates a need to understand the participants' perspective, in addition to traditional conservation approaches that centre the artist's intention of the artwork.

It became clear to us that there is value in gathering participant documentation that can help to articulate the social nature of participatory art especially as the artwork's relationship to the community changes over time.

[1] Recent S/E Asia archival collections include the Asia Art Archive (2000), Thai Art Archives (2010), The Indonesian Visual Art Archive (2007), National Gallery of Singapore archive (c.2015)

The artist discussion

Kunavichayanont's own perspective or voice was integral to our thinking through the past, present and future of the artwork. Our online meeting with the artist included both object and textile conservators and curators. In planning for the interview, we formulated a set of open prompts centred around the exhibition history of the artwork, the materials, the community's interaction with the artwork, and its care and future display. This follows a cultural biographical approach (Appadurai 1986, Kopytoff 1986, Van de Vall et al 2011) that traces the artwork, its interactions and networks over time.

Kunavichayanont described that the collaborative effort by participants to inflate the elephant was a significant relational factor, with the artist's belief that people needed to contribute to heal society after the devastating effects of the financial crisis. The discussion also centred around the relation of 'closeness' that this action of breath donation affords.

Kunavichayanont's move from latex to the non-preferred medium of silicone was due to the limited lifespan of latex, with the other artworks in the series having degraded with the artist noting, 'Ephemeral is not my concept, my intention I want to make the work last longer. The importance of the material will follow the content.' Recognising degradation as a limiting factor, the artist described that if participation was not possible the artwork could be displayed deflated or remade when required. Video and photographic documentation was discussed as one way to convey the collaborative nature of the artwork, and ongoing discussions to collect this material are being undertaken. In relation to the risks of sharing tubes for breath donation, Kunavichayanont felt given the current post-pandemic context, that people would be fearful of participating with the artwork.

Analysis

FTIR-ATR is a rapid method for identifying polymeric coatings on textiles (Shashoua and Skals 2010) with the depth penetration of the beam usually within 5 microns (Liu and Kazarian 2022). Spectra were acquired for each sample at a resolution of 4cm-1 using Agilent Cary 670 Fourier-transform infrared (FTIR) spectrometer equipped with a diamond/ZnSe ATR accessory. 64 scans were collected over the range 4000–600 cm−1. Analysis was undertaken on several areas of the elephant to confirm the presence of latex and compare degraded and flexible areas.

The FTIR spectra [fig. 5] shows the characteristic peaks for latex attributed to cis-1,4 polyisoprene with absorption bands observed at 2960 cm−1 and 1450 cm−1 (Lambert et al 2013). Comparison of the spectra from the hardened and flexible areas show a band at 1711 cm-1 on the hard sample, the marker for degraded natural rubber (Shashoua 2011).

Additives within the latex were identified using SEM-EDS and include sulphur, consistent with a vulcanisation agent causing cross linking the polymer chains, while the presence of talc and calcium carbonate are likely fillers. Inorganic elements were found which may be naturally occurring inorganic salts and impurities in the latex (Lv,Fang,Yu, Rojruthai, Sakdapipanich 2022).

Microscopy [fig. 6] showed air bubbles from the latex dispersion, along with embedded particulates, likely a result of paint transfer from the cast of the Bangkok Zoo elephant.

Given the odour of the artwork, VOC measurements were undertaken. Active sampling using Drager tubes was undertaken within the box [fig. 7] to determine the presence of volatile acids. Positive results indicated the presence of ammonia, acetic acid and formic acid. These three acids are known to be additives to the latex dispersion as preservative and coagulating agents respectively, although acetic acid is also known to be an oxidation product from rubber degradation (Dyer et al 2011).

Negative results were obtained for sulphur dioxide and hydrogen sulphide. This result could be attributed to our method of testing which involved placing the tube beneath the mylar interleaving and the lower detection limit of Dreager testing compared to more sensitive techniques such as GC/MS (Viglione IAQ 2020). Previous studies found variable the presence of sulphur as a component of VOCs emitted by rubber (Hacke et al 2013, Dyer et al 2011).

In summary, the results are consistent with information provided by artist and the expected deterioration of natural latex.

Considering treatment

As there was no immediate display, our attention turned towards preventive conservation activities. Anoxic storage for natural rubber items has been an established method within conservation since 1999, when Shashoua presented results from a 5-year trial of rubber items stored anoxically at the BM. These results were subsequently reviewed again in 2011 (Dyer et al 2011), confirming the suitability of anoxia for storage of rubber items. In their 2014 study on anoxia storage for latex coated textiles, Hacke et al added scavengers to the anoxia treatment, to scavenge any VOCs not caused by the oxidation process that present risks to cellulosic supports within an enclosed environment.

This approach has been used successfully at the Heritage Conservation Centre (HCC), where in 2018 an organic leek dress, from Chia Chuyia's performance, *Knitting the Future* was stored in an anoxic environment using the RP System®, RP Agent A, RP Agent K, Gas Q and activated charcoal cloth as VOCs scavengers due to off-gasing of acetic acid from the leek. When the dress was revisited in 2021 it was found to have minimal change.

The presence of volatile acids within *Elephant Breath (Collecting)* may cause acid hydrolysis of the cotton underlayer when placed in an enclosed anoxic environment. As such, an anoxic method with Gas Q and charcoal fabric will be undertaken as these two types of scavengers are known to absorb VOCs, formaldehyde, and acetic acids. Monitoring with A/D strips or chemisorbers are crucial to determine timely changing of the scavengers. Ongoing work is being undertaken at HCC to identify a method of accurately calculating the required number of scavengers and their efficacy over time to reduce waste during re-storage.

While a larger acid free storage box has been made, the tail, head and trunk still require folding. The use of polyester wadding filled polyester stocking covered with silicone release mylar is used to support the folds.

Discussion

Following the artist discussion, possibilities for future display included: the reinstatement of the artwork as a participatory work while acknowledging the problematics of the current post-pandemic context, the potential future remaking of the artwork, and the presentation of the artwork in a deflated state with the accompaniment of archival sources. Each decision comes with its own kind of loss or change such as material loss, embodied interactive loss or loss of original context. Although each one addresses, in its own way, the idea of collaboration and closeness that we learned was so integral to the artwork.

Dekker, Giannachi and van Saaze (2016 p.66) discuss how documentation can signify performance arguing that 'documents are not in opposition to performance, but they emerge from and are part of the environment generated by performance. Not only do they generate meaning in relation to it, they become a sign for it'. In this sense, documents create an 'environment' acting as signifiers of the relational properties – the collaborative effort required to inflate the artwork and the closeness and authorship of the community within a specific place and time. For artworks with failing materials or reliance on a particular socio-cultural context this approach can reinstate or signify these properties.

Preventive conservation and supporting the relational properties through archival depictions is a way to sure up the artwork's possible presentations and pay attention to the significance of the moment in which the artwork was made. We recognise that our post-pandemic moment is just another moment in the artwork's life, and that an uncertain future might hold other interpretations and options for display.

Conclusion and future work

Recognising the significance of participatory practices within the S/E Asia region and within the Singapore National Collection, has required us to clearly think through what participation means. Using Aman's (2023) discussion, we considered social forms of organisation and the production of social meaning and social effects as significant properties of participation.

The Singapore National Collection is devoted to collecting the material history of Singapore and secondary or archival documents related to artworks are generally not collected[2]. In the case of *Elephant Breath (Collecting)* in particular, and participatory art in general, documentation can be thought of as a means of preservation in cases where the artwork's relational context has changed, or material limitations exist. In such instances, documentation can act as a signifier

[2] Within Singapore, archival collections relating to limited number of artists are collected by The National Gallery of Singapore Library and Archive and include ephemera, photographs, and records of government approvals.

towards an artwork's significant relational properties. While archival materials generally fall within a curatorial remit, it may fall to conservation to consider or even advocate for archival materials as a means to convey these properties. Taking in this type of material would require an extension of collection management processes, including cataloguing and storage, while also considering the sometimes-blurred boundary of what is archive and what is artwork (Tate 2023).

For documenting contemporary participatory artworks, we are currently utilising adapted performance documentation templates (Lawson et al 2020, 2021) to capture written information about the artwork and its activations. However, more work could be undertaken to further develop these templates to reflect Aman's (2023) discussion of participation – to document the social organisation, social meaning and social effects generated by an artwork. Moreover, documenting participants experiences has not yet been undertaken for National collection works, and can provide valuable, diverse information about the social and personal experience of an artwork within a specific place and time.

Preventive conservation strategies are essential for artworks such as *Elephant Breath (Collecting)* where the material agency of the artwork affords participatory qualities. Using anoxic storage with scavengers tailored to the VOCs emitted will assist with material longevity of the latex and the possibility of presentation as a collaborative, participatory work at some point in the future.

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Figure 1 and Figure 2: *Elephant (Breath Collecting)* 1998. Exhibition image from 'Rain Drops- Pig's Shit Running' Tadu Contemporary Art, Bangkok 1998.

Figure 3: *The White Elephant* 1999. Exhibition image from 'Optica' Montreal, Canada 2001.

Figure 4: *Siamese Breath (Twins)* 1999. Phra Pin Kiao Bridge, Thailand, 2000.

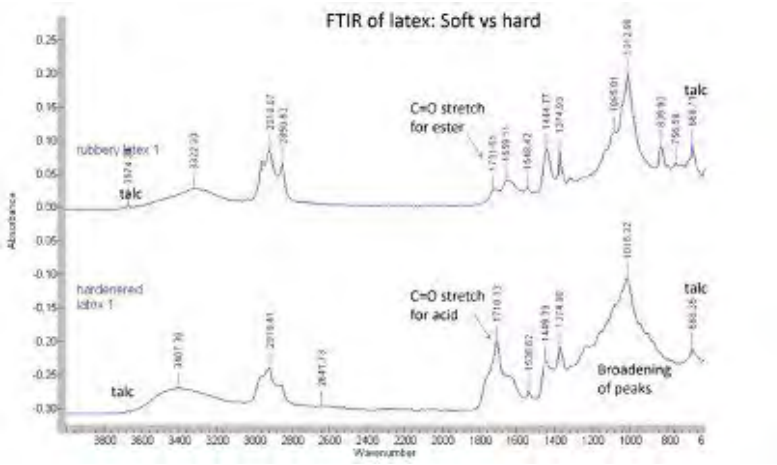

Figure 5: FTIR-ATR of flexible (upper spectra) and hard (lower spectra) latex.

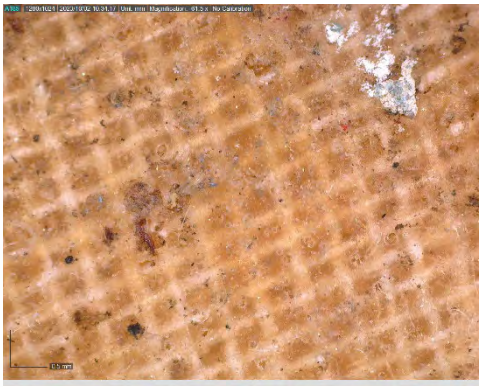

Figure 6: Close up of the embedded particulates and paint under the Dino-lite.

Figure 7: Testing for VOCs using the Drager pump in a mostly enclosed box the artwork was contained in.


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