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A sociocultural examination of Ugandan bark cloth for sustainable textile futures

Abstract

Sociocultural examination of Ugandan bark cloth aims to harness new knowledge about the creative development potential of this natural fibre for future sustainable textile and apparel applications. A positional Pan-African approach elevates African heritage and the craftmanship of bark cloth making in Uganda, inscribed by UNESCO as a Masterpiece of the Oral and Intangible Cultural Heritage of Humanity. This ancient practice and regenerative process involves cultivating cloth from the 'mutuba' natal fig tree, *Ficus natalensis*. Materials-led experimentation explored fabric manipulation and textile coloration methods using indigo dyeing and dye-resist techniques. Investigation attempts to advance understanding and alter perceptions of bark cloth through visual, material and physical probe and decolonial perspective.

Keywords: bark cloth, natural fibre, sociocultural, regenerative, textile futures, sustainability

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Introduction

Ugandan bark cloth is a regenerative fibre[1] and ancient craft attributed to the Baganda people of the East African Buganda Kingdom. Ugandan bark cloth making is recognised by UNESCO as a Masterpiece of the Oral and Intangible Cultural Heritage of Humanity. The natural textile product is still farmed and manufactured in Uganda today. Tree farmers and master craftsmen harvest the inner bark of the 'mutuba' natal fig tree, *Ficus natalensis*. The stripped tree is protected by wrapping and binding the trunk with leaves and grass to allow regeneration. The process of bark cloth making using the same tree can occur annually for 60 years, positioning bark cloth as one of first sustainable textiles known to humankind.

The rise of imported cotton fabrics in the mid-19th to early 20th century prompted a decline in the demand, production and use of bark cloth in East Africa and across the African continent. Bark cloth wearing was commonplace and symbolic of African identity and culture precolonialism. During this era, the natural fibre was altered in colour to differentiate status, typically wrapped around the body and styled for ceremonial dress and cultural events. However, colonial and postcolonial factors have led to faded African dress histories like this. By the late 20th century, BARKTEX®, a company committed to the systematic development and production of bark cloth, stimulated a revival, positioning the 'tree fabric' as a modern competitor in textile markets. Artisans, designers and SMEs, (Small and Medium Enterprises) also continue to advocate for and sustain Ugandan bark cloth practices, upholding legacy through designed outcomes. Despite a resurgence, bark cloth seizes to widely infiltrate textile industries. The natural fibre can carry primal connotations, which is off-putting for some and challenges mainstream garment aesthetics and textile performance. The architectural stiffness of bark cloth conjures up notions of a product in its infancy and is therefore considered inferior to other textile materials. Pitched as a sustainable alternative to leather clothing, performance properties of bark cloth such as tensile strength and dimensional stability, for example, are relevant key deliberations within broader apparel design and manufacture contexts.[2,3]

This paper is a design research discussion that aims to harnesses new understanding about the opportunities for developing Ugandan bark cloth fibre within modern textiles and apparel design contexts. The objective of this work is to retrieve African dress histories whilst propose new strategies for the creative and technological development of bark cloth for sustainable wearable fibre solutions of the future. Through interpretation, this investigation considers critical ways that regenerate and reenvision natural materials and clothes,[4] as well as people and environments. Experimental design intervention employs positive action principles[5] and decolonial ideology to probe the social and ecological benefit of using bark cloth as an intelligent system for thinking and making.

Material and methods

A qualitative approach accommodates the diasporic intersectional identities of the researcher to inform and enrich the investigation (Buckridge 2016). A regenerative decolonial design framework[6] integrates positional advocacy and creative exploration whilst symposia and exhibition (Figure 1) facilitate knowledge exchange and engagement (Figure 2). A practice-based materials-led approach utilised 100% Ugandan 'mutuba' tree bark cloth made in East Africa. Experimental samples and fragments showcase the bark cloth through an Afrofuturist lens[7] and propose new clothing concepts to a broader audience (Figure 3). Applied investigation involved fabric manipulation and textile coloration techniques using an indigo dye vat to colour and pattern the bark cloth.

Figure 1 Untreated and indigo dyed Ugandan bark cloth with Japanese *boro* stitching. *Crafting bark cloth: age-old practices, future thinking*; by Kerri Akiwowo and Jess Peacock, 2025. In: Sustainable Textile Futures: Contemporary Design Responses to Traditional Japanese Craft (Exhibition), 17 January-10 March 2025, Japanese Embassy London, UK.

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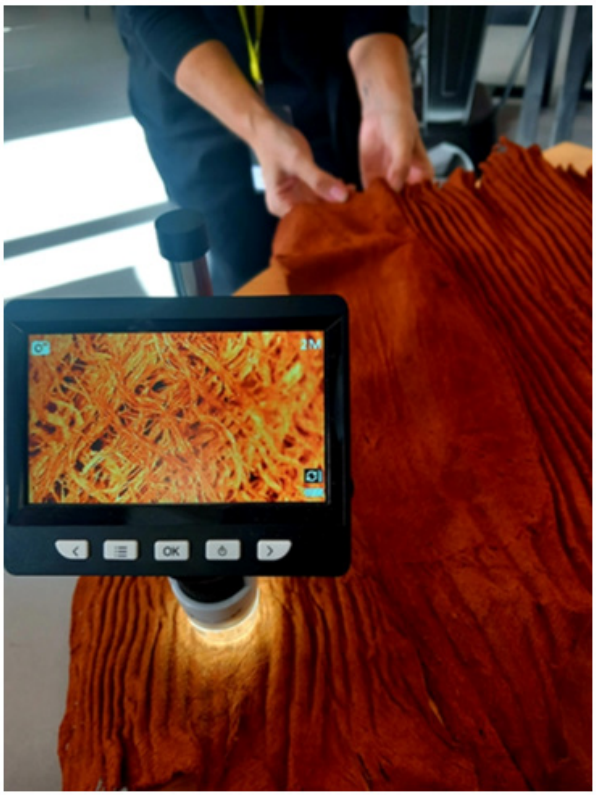

Figure 2 Bark cloth engagement. In: Making Futures Conference, *Beyond Objects; Materiality at the Edge of Making*, 17-19 October 2024, Arts University Plymouth, UK. Track: Craftmanship, Artisanal Knowledge and the Aesthetics of Place.

Figure 3 *Africani Wardrobe*. Pleated dress pattern block, 2023.

Results

Fabric manipulation: transforming bark cloth: Pleated bark cloth was created by undertaking a fabric manipulation technique called shirring. This process involved hand sewing multiple rows of running stitches in a directional linear pattern into the dry bark cloth. Once stitched along the y-axis of the cloth, excess threads were pulled to form a ruching effect to form along the x-axis (Figure 4). The bark cloth was submerged in cold water until fully absorbed. When removed, excess water was gently squeezed out and the sample was pinned outside to air dry. Stitches were removed from the dry sample generating a pleated pattern. A second three-dimensional (3D) 'architextile'[8] was created exploiting the sculptural properties of the bark cloth. Small uniquely shaped stones were collected and employed as a scaffold and shape memory object. The stones were laid on the cloth and concealed by wrapping in a random arrangement using rubber bands to secure each one. The wet-to-dry process was repeated and the stones removed, generating a 3D organic form (Figure 5).

Figure 4 Pleated bark cloth created by shirring technique, 2023.

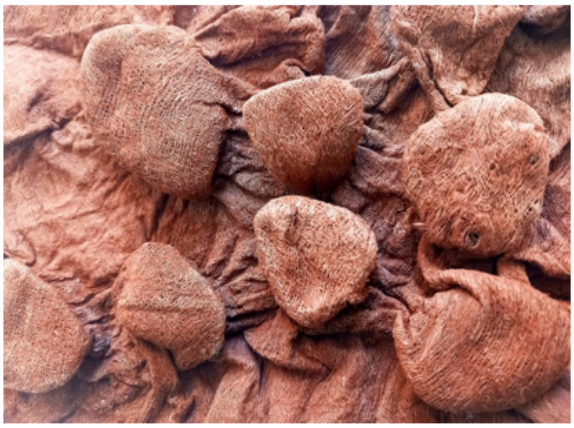

Figure 5 3D sculpted 'architextile' bark cloth sample, 2023.

Textile coloration: indigo and resist dyeing barkcloth: Bark cloth fragments were dyed in an indigo dye vat using commercial dyestuff (Figure 6). Each sample was submerged and gently agitated beneath the thin blue skin then removed and exposed in air to allow the characteristic oxidization reaction to occur—from an initial green shade, gradually turning bluer. The process of submerging and removing the bark cloth was repeated until a desired blue shade was achieved. Increased repetition of the process produces a darker deeper shade of blue cloth by building up the colour. Therefore, indigo dyeing

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facilitates a gamut of hues obtainable. Indigo resist dyeing involved wrapping and tying the bark cloth with rubber bands before entering the dye vat to create a barrier when submerged/oxidised. Once dyed, the bands were removed to reveal the undyed fibres creating a 'positive/negative' contrasting pattern (Figure 7) (Table 1).

Figure 6 Indigo dyed bark cloth samples, 2025.

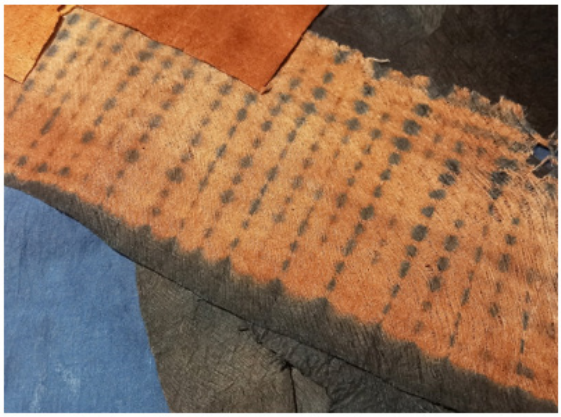

Figure 7 Indigo resist dyed bark cloth, 2025.

Discussion

Positional advocacy actively employs material demonstration, creative dissemination, presentation and dialogic exchange to harness experiential engagement and diverse perceptions of bark cloth natural fibre. Visual and physical outcomes probe historical themes and narratives linked to cultural identity, lived experiences and the integrity of African people through heritage design. Pleated bark cloth symbolises the act of hand sewing stitches into the material and conjures up notions of labour, time and mastery sustained by specific communities over several years and generations. Sculptural designs initiate '…intriguing architectural ensembles…'9 through fabric manipulation, whilst textile coloration employed indigo dye and resist practices to demonstrate further creative potential and added value.

Table 1 Experimental results: textile manipulation and indigo dye methods

S. No	Description	Method	Experimental parameters	Results
1	Undyed bark cloth	Textile manipulation: Shirring	Weight: 200g Technique: hand stitching with cotton thread, running stitch, ruching effect Pattern creation: wet-to-dry setting	Pleated bark cloth
2	Undyed bark cloth	Textile manipulation: 3D Architextile	Weight: 20g Technique: trapping, wrapping and tying stones with rubber bands. Pattern creation: wet-to-dry setting	Sculpted bark cloth
3	Indigo dyed bark cloth	Indigo dyeing	Weight: 20g Vat dye: 15L bath containing warm water, pre-reduced indigo dye, soda ash, sodium hydrosulfite reducing agent Technique: submerge/oxidise repetition	Indigo dyed bark cloth
4	Indigo resist dyed bark cloth	Indigo dyeing	Weight: 20g Vat dye: 15L bath containing warm water, pre-reduced indigo dye, soda ash, sodium hydrosulfite reducing agent Technique: wrapping and tying pre-dye, hand-dyeing, submerge/oxidise repetition	Indigo resist dyed/ patterned bark cloth

Natural indigo plant dye originates from the botanical species, *Indigofera Tinctoria*. Indigo dyeing is an ancient process and ancestral technique that has global cultural significance[10,11] and has been practiced across Africa for centuries. For example, in Nigeria, indigo resist dyeing techniques are known as *adire alabere* in Yoruba.[12] Traditionally, the tied or stitched resists are unpicked and the dyed cloth is unwashed. Other resist methods include folding and bunching fabric to create a wide variety of patterns. As a Black British female textile researcher of Caribbean heritage and diaspora, this approach seeks to promote African dress history, textile practice and agricultural richness by blending sustainability perspectives with intersectional reflection.

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Experimentation indicates capability and scope for designing with bark cloth by celebrating the aesthetic and material value of the natural fibre. Fabrication exists to enhance cultural understanding and increase appeal. The potential for innovation is recognised, acknowledging the scope for coloration development and by consulting conventional textile construction processes. Expanding possibilities in sustainable textile practice, including resource management, design and manufacture is relevant to apparel, footwear, interior and product applications and industries.

Academic studies offer valuable scientific insights about the versatility and performance properties of bark cloth relevant to textile and clothing developments. However, there is insufficient exploration and knowledge about the scope of the cloth from a critical textile development perspective, therefore systemic design[13] thinking is limited. Investigation into the cultural history of Africans as a principled approach to inspire innovative regenerative design is absent in the literature. Existing bark cloth studies do not evidence positionality or decolonialisation as mechanisms for creative exploration or responsible design. Thus, an attributional effort to (re) fashion Ugandan bark cloth was explored as a '…strategic act of cultural reappropriation'.[14]

Conclusion

This examination symbolically employs Ugandan bark cloth natural fibre as a vehicle for reflections on the past, knowledge transfer and proposition for sustainable textiles. Investigation positions the integrity of natural fibres and processes, material value and heritage practices to better inform textile and clothing practices and development. Creative experimentation towards innovative textile and fashion futures used fabric manipulation and indigo coloration techniques. This exploration considers fundamental change and potential opportunities for systemic advancement of bark cloth within fabric and apparel contexts, relevant to individuals, communities and industries. Sociocultural perspective proposes regenerative decolonial design methodology to template Ugandan bark cloth as a mark of cultural reclamation, indigenous significance, ancestral knowledge and ecological esteem.

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None.

Conflicts of interest

The author declares that there is no conflict of interest.

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