

PIGMENTS AND PRESERVATION: ENHANCING COLOUR INTENSITY AND DURABILITY ON RAFFIA AS SUPPORT/GROUND IN PAINTING USING EPOXY RESIN

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Abstract

Woven raffia, a fibrous mat made by interlacing strands from the leaves of the raffia palm, is traditionally used for crafts, textiles, and decorative purposes and has gained popularity in its deployment as ground/support in painting. Extant studies on raffia have hinged on the woven composite obtained, chemical and microwave treatments to improve raffia, the craft of raffia weaving and its socioeconomic significance, amongst others, with less attention paid to the use of epoxy resin for preservation and aesthetics. This study was, therefore, designed to foreground the role of epoxy resin in the preservation of woven raffia. Using a studio-based investigation, the potential of raffia as an alternative support/ground for contemporary painting is highlighted in five (5) selected raffia woven works: *Silence*, *The Hustle Continues*, *African Woman*, *Being a Woman* and *Instrument of Seduction*. Findings reveal that epoxy resin and car paint are instrumental in preserving the stability of pigment-woven raffia when used as ground/support when applied. Epoxy resin preserves woven raffia, provides a glossy finish and protects it from weather and pests, thereby ensuring its durability. Car paint enhances the texture quality more than acrylic or oil paints. Additionally, wood preservatives like DDVP are ineffective over prolonged moist storage due to fungal growth. Thus, beyond technical outcomes, the study highlights the cultural significance of integrating indigenous materials into modern artistic practice, thus bridging tradition and innovation. It is hoped that this paper would be a reference material to painters, students, art lovers and researchers.

Keywords: Epoxy resin, woven raffia, car paint, DDVP reinforcement, pigment

Introduction

Artist over the years, source different materials in carrying out their works. Epoxy resin, a synthetic polymer that is often used by sculptors, has become a necessary material used by artists in other aspects of creative arts, including painting on raffia (Bargues-Ballester, 2015). Several scholars have appreciated the multifaceted functions of epoxy resin since its introduction into other creative art processes. Rahman and Akhtarul-Islam (2022) submit epoxy resin application to artworks significantly improves the strength, durability, and protection of construction materials, notably by reinforcing concrete, reducing chloride ion permeability, and serving as a protective coating against corrosion, saltwater, and other environmental aggressors. While investigating the

chemical properties of epoxy resin, Gibson (2017) opines that it is the most important class of thermoset because of its outstanding mechanical properties and chemical resistance. With respect to cultural artefacts, Chen et al. (2024) emphasise that epoxy resin is vital in cultural relic protection due to its strong bonding and consolidating properties, which help repair and stabilise fragile artefacts.

As a chemical property, Diaz-Granados et al. (2024) remark that epoxy resin usage ensures durability in all forms of artwork and craft, including raffia with its divergent properties. Kocak et al. (2015), while examining the composite properties of raffia, show how lightweight, long-lasting textile sculptures that honour African cultural traditions may be made from native fibres like cane, raffia, and willow. The study foregrounds not only the economic and aesthetic implications but also addresses issues like the health hazards connected to chemical dyeing while showcasing the creative potential of these materials. Bakare and Bako (2016), in their investigation of woven sculptural pieces as added dimensions to textile design, explore chemical and microwave treatments to improve raffia woven fabric's adhesion in bio-composites, asserting that acetic acid and microwave energy have proven most effective. Djoumessi et al. (2022) submit that utilising *Raphia vinifera* fibre fabrics, especially in canvas weave, effectively reinforces epoxy composites, with optimal performance at 50%. With respect to the act of weaving raffia and the socioeconomic significance, Centillas et al. (2024) submit that enculturation and government support enhance weavers' skills and income, leading to the development of the Quadrant Theory of Cultural Dynamism (QTCD), which promotes cultural globalisation by integrating peripheral cultures into the mainstream, and the Contextualised Raffia Instructional Model (CRIM), which fosters 21st-century learning competencies, national cultural identity, and pride among students and teachers.

Beyond raffia as a *multidimensional material* that combining **aesthetic, scientific, economic, and cultural** values as suggested by the various scholarly submission above, the application of epoxy resin, brings to the fore the concept of conservation of the various artistic and cultural works. The study underlines the application processes of epoxy resin to woven raffia as a reinforcement agent and amplifier of aesthetics. This is evident in the various studio presented works in this study.

Materials and Methods



Figure I: Preliminary Sketch "Hidden Pains"



Figure II: Preliminary Sketch "Hidden Pains"

the composition and surface exploration.

Surface treatment of the raffia was then carried out to prepare the material for painting, which involved specific techniques to improve adhesion and stability. Detailed sketches were made directly on the treated raffia surface, allowing for precise application of media. Additionally, the researcher experimented with assembling unconventional shapes to maximise the artistic potential of raffia. Throughout the process, various pigments, including acrylic, oil, and car paint, were tested to determine suitable media for the texture and support optimal ways to enhance the durability and visual quality of woven raffia in contemporary painting. This comprehensive approach enabled the researcher to systematically evaluate the interaction between materials and surface treatments in achieving the desired artistic outcomes.



Figure III: Application of Chemicals on Raffia

Discussion on the Application of Epoxy Resin on Raffia Art Works

The application of epoxy resin on raffia foregrounds various sociocultural realities, including stigmatisation, socioeconomic occupation and the concept of the African woman. These realities are depicted in the portrayals of silence, the hustle continuing, African women, being a woman and an instrument of seduction, respectively.

Plate 1: Ejiroghene Tadafe, *Silence*, 2020, (Car Paint, Woven Raffia Mat Coated with Epoxy Resin, 33cm Diameter)

The face in the artwork is incomplete. Shame is a normal response to being violated, or the title of the painting. On a raffia platform, *Silence* is an oil painting. A shut mouth and a nose that is bleeding with black tears are depicted in this feminine picture. "Silence" is symbolised by the bleeding nose and the closed lips, as silence is the biggest protection against domestic abuse. Up to 70% of victims of domestic abuse report that their abusers coerced them into remaining silent by threatening to harm or kill them or any family members. Shame following abuse is the most frequent excuse given by victims for not speaking up. In fact, abuse by its very nature is humiliating and dehumanising. In practice, abuse is dehumanising and degrading by definition. As a result of someone else's acts, many victims experience a sense of invasion or helplessness. The experience of sexual assault itself dehumanises the victim.

Last but not least, the black tears illustrate how sexual assault is stigmatised in our cultures. Because of this, many victims are reluctant to disclose their memories of sexual harassment.



Because of the rape culture in our society, this kind of action is accepted and tolerated. Blaming the victim is the primary manifestation of rape culture. "She asked for it," or "Maybe if she wasn't wearing that," are common responses from those who place the responsibility on victims. The victim is immediately marginalised by this kind of thinking, which makes it more difficult for them to open up. If the victim believes that society is holding them responsible for the assault, they will not feel confident enough to speak up. By absolving the abuser of responsibility for their acts and placing the blame on the victim, this mindset empowers the abuser. There are instances when a victim may be too traumatised to talk about the assault.



Plate 2: Ejiroghene Tadafe, *The Hustle Continues*, 2021. Oil Paint on Woven Raffia Coated with Epoxy Resin, 30 X 30cm.

Nigeria is portrayed in the painting "The hustle continues" above as a maritime nation where fish is a staple food and fishing contributes significantly to the national economy. harvested by artisanal fishermen utilising boats and nets from a variety of coastal and inland waters. Fish farming is one type of agricultural technique that is most common in Nigeria's

coastal states. However, the agricultural and fishing industries in riverine regions are currently suffering greatly from the detrimental effects of oil extraction such as environmental degradation.



People in the neighbourhood now fish outside of rivers and streams that have been contaminated by oil drilling and related activities. A sizable section of the population in coastal regions depends on the fishing industry for both their livelihood and their seafood nourishment. By working in the fishing industry, the majority of women dedicate their time, abilities, and talents to their families' welfare. Like coastal

fisheries, their contribution to food production has grown in significance as a means of escaping poverty and enhancing or improving food security. In general, women in fishing communities contribute heavily to the fishing industry and are vital to improving their families' standard of living. Though supportive, women's involvement in fish-related activities is essential and important, as fish farming is traditionally seen as a male-dominated endeavour.

Plate 3: Ejiroghene Tadafe, *African woman* 2020. Oil paint on Woven Raffia Mat Coated with Epoxy Resin, 60 X 60cm.

The picture above, which symbolises women, is 33 cm in diameter and was created on a circular woven mat called African Woman. Whether actively or passively, women have undoubtedly contributed to the idea of contemporary African nation-building. The painting's use of many hues conveys the idea that women are knowledge providers and tools for cultural revitalisation. The social and political changes gave rise to the powerful voices of women. They express their thoughts



while making their words heard on the lucidity of their social challenges and experiences. The face of the lady is painted black, as you can see if you look closely. This illustrates how African countries are patriarchal and have made women want to break out from the position that has been prescribed for them by society. In order to find the meaning of femininity, this woman is said to be pursuing mental, emotional, and spiritual development free from the forceful engendering that her culture tries to instill in her. This is an effort to determine the woman's potential relevance to the general growth of her community. She has been seen to assume the roles of a co-wife, mother, sister, daughter, wife, and mother/daughter-in-law. She plays various parts throughout her life, switching between them or even performing two or more of them at the same time. The long-standing patriarchal customs of male control and female subservience had not been significantly challenged by political freedom. The Nigerian woman, as an African woman, has her roles defined by history, cultural practice and religious subservience to the role of men.

This lady was moulded into the customary mould that Nigerians use to bear the load of marriage, childbearing, wifehood, motherhood, and widowhood. Despite this, the lady continued to demonstrate her value to society on a daily basis, which sparked a desire to participate actively in her community instead of passively and to fulfil her share of nation-building. This was seen as "feminism." This was mostly done in an effort to improve the negative perception of African women and to encourage them to achieve more. Women throughout the world have long wanted to break free from the role that patriarchy has prescribed for them. A woman's mental, emotional, and spiritual development are all part of her quest for self-realization. This is feminism's whole philosophy. However, gender parity and women are urged to resist the roles since they disconnect the women who accept and use them.

Plate 4: Ejiroghene Tadafe, *Being a Woman*, 2021. Car Paint on Woven Raffia Coated with Epoxy Resin, 30 X 30cm.

Just Being a woman might be taxing at times, and it ought not to be, but society has forced women to put in more effort for no apparent reason. The majority of women put almost twice as much effort to demonstrate their equal competence, which is draining. They are actually being killed by generations of excessive blood pressure. She's exhausted from trying to be great for everyone (and everything); some days she can't dream, and some nights she can't sleep. "She's exhausted." She is unable to sweep the floors, prepare dinner, or fold her clothing. She is exhausted from raising children, dealing with a drunk husband, and worrying about housing and joblessness. Women will stop at nothing to maintain the family unit. Women are delicate but lovely. Families, communities, houses, babies, and kids are all supported by women. In order to survive, women have really been educated to conceal their fatigue from society. However, women are now being trained to acknowledge when they desire to cry and when they are fatigued.



Plate 5: Ejiroghene Tadafe, *Instrument of Seduction*, 2020. (Acrylic on Circular Woven Raffia, 33cm Diameter)

The artwork "Instrument of Seduction" above was created on raffia that has been woven in a circle. If you look closely, you will see that the picture shows a nude woman within a bold-faced woman. This illustrates how our societal practice reduces women to their naked sexuality above all else, making them objects for men's sexual need, want, and viewing pleasure. At the exact same time as their whole demeanour conveys intimacy and an eager desire to comply to all men's sex requests at all times, the prevalent objectifying representations of women portray them as barely anything

than their bare body parts, sensuous beauty, and alluring conduct. In this sense, males may be completely unaware of women's true intentions. As a result, they could really believe what they were taught in this culture that women are always interested in having sex, even if this is not the case. While women completely deny the seduction claim, they attribute the sexualised look to their desire to feel and appear attractive. Most men interpret the sexualised gaze as a sign of interest in sex and purpose to persuade.

Findings

With respect to pigment application and colour intensity, the discussed works underline the fact that the choice of pigments critically influences colour vibrancy and overall visual impact. In the same vein, car paint enhances the colour quality more effectively than acrylic or oil paints. This provides a glossy, bright finish that remains vivid over time. In the portrayal of "The Hustle Continues", pigment integration with the raffia substrate is successfully reflected. This confirms the assertion that appropriate pigment selection, particularly those with high opacity and adhesion properties, tends to achieve heightened colour intensity on textured, organic surfaces like raffia.

Furthermore, in the presented raffia works above, the application of epoxy resin acted as a protective layer. It provides a glossy, weather-resistant surface that shields pigment from environmental factors such as humidity and pests. Additionally, as a preservative, epoxy resin plays a crucial role in maintaining the artwork's durability and vibrancy. Therefore, the resin did not only ensure longevity of the artworks but also enhanced the aesthetic appeal by giving the surface a sleek finish, thereby balancing textured raffia with a visually appealing gloss. This interaction between the pigment and epoxy resin as applied in the artworks considered in this study ensures the creation of visually striking and resilient works. It exemplifies how proper pigment selection and suitable preservation methods, like epoxy resin, advance the quality and longevity of paintings on unconventional materials like woven raffia.

Moreover, beyond enhancing physical durability, the application of epoxy resin contributes to maintaining the integrity of the painted surface. Similarly, while the thematic elements such as *seduction* and *womanhood* are conveyed through the works, the findings indicate that the physical properties of materials, pigments and resin directly impact the expressive possibilities of these

themes. The textured surface, enhanced by vibrant pigments and preserved with epoxy resin, enriches the visual storytelling by adding depth, contrast, and permanence to the artistic message.

Conclusion

The transformative role of epoxy resin applied to woven raffia artworks is demonstrated in the selected works investigated in this study: *Silence*, *The Hustle Continues*, *African Woman*, *Being a Woman* and *Instrument of Seduction*, respectively. The selected works foreground the capacity to merge traditional craftsmanship with current artistic innovation. Amidst the capacity of epoxy resin to act as a protective coating, it further enhances the structural integrity and the richness of the raffia virtually. This is often more effective when combined with car paint as obtainable in “silence” and “being a woman”. The combined application of both materials intensifies the colour vibrancy while producing a glossy, durable surface resistant to moisture, pests and environmental wear. The study also underscores the fact that the various material combinations in the production of the discussed artworks on woven raffia improve not only the longevity of the works but also reinforce their cultural and aesthetic significance. Thus, contrasting works carried out using epoxy resin and conventional preservatives like DDVP, the former proves to be more effective in moisture resistance, fungal growth preservation and degradation. Ultimately, working with epoxy resin tends to be a more sustainable solution for the prevention of artworks.

Additionally, the study situates the use of epoxy resin within broader sociocultural and thematic contexts, as seen in *Instrument of Seduction* and *Silence*, where the material’s reflective qualities amplify explorations of gender, identity, and cultural expression. The integration of innovation with indigenous materials, in the context of this study, revitalises raffia as a medium of modern expression, preserving its authenticity while aligning it with global art practices. Hence, the research advocates for a holistic approach to art creation and conservation. This implies a balance of science, culture, and sustainability. It also positions epoxy resin as a crucial tool for ensuring the durability, aesthetic appeal, and cultural continuity of raffia-based art in the evolving landscape of contemporary artistic practice.

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