

Cultural Technology and Indigenous Symbolism in Oroko Land: A Critical Re-Examination of “iso” and Neck Beads

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ABSTRACT

African societies possess complex symbolic systems that function not only as cultural expressions but also as technologies for organizing social life, transmitting knowledge, and sustaining identity. This article critically examines two central Oroko cultural symbols—the “iso” and the neck beads worn by Oroko chiefs through the lens of Cultural Technology. Drawing on ethnographic interviews, participant observation, and symbolic analysis, the study argues that these items function as sophisticated indigenous technologies that encode authority, identity, cosmology, and social regulation. The research demonstrates that these symbols operate as communicative devices, governance tools, and repositories of indigenous knowledge. The study further explores how modernization, Christianity, and globalization reshape their meanings and uses. Findings reveal that Oroko symbols remain dynamic cultural technologies that continue to structure leadership legitimacy, social cohesion, and cultural continuity in Oroko land. The article calls for renewed scholarly attention to African indigenous technologies as frameworks for understanding cultural resilience and innovation.

Keywords: Oroko, cultural technology, symbolism, indigenous knowledge systems, material culture

INTRODUCTION

African cultural systems are deeply embedded in symbolic practices that serve as frameworks for social organization, identity formation, and knowledge transmission. These symbolic systems are not merely decorative or ritualistic; they are functional technologies that structure everyday life and encode complex cultural logics (Geertz, 1973). Among the Oroko people of the South West Region of Cameroon, symbols such as the “iso” and the neck beads worn by chiefs play central roles in defining authority, mediating cosmological relationships, and sustaining communal cohesion. These symbols are integral to the Oroko worldview, shaping how individuals understand their place within the community and the broader spiritual universe.

This article seeks to address this gap by reinterpreting Oroko traditional symbols as cultural technologies—systems intentionally designed to solve social, spiritual, and political problems. Cultural Technology, as used in this study, refers to the symbolic, material, and ritual tools societies develop to organize life, transmit knowledge, and maintain social order (Miller, 2005). By examining the “iso” and neck beads through this lens, the study highlights the technological sophistication embedded in Oroko cultural practices.

The “iso” worn by many on important traditional events serves as a visual marker of fertility, purity, and traditional leadership identity. The colors (white and orange), patterns, and method of wearing the “iso” communicate specific messages about rank and legitimacy. On the other hand, the neck beads worn by chiefs function as spiritual and political technologies, offering protection, signifying lineage, and legitimizing chieftaincy authority.

These symbols are not static relics of the past; they are dynamic cultural technologies that continue to evolve in response to modernization, Christianity, and globalization. While some youths perceive them as outdated, many chiefs and elders reinterpret them to maintain relevance in contemporary contexts. This dynamic interplay between tradition and modernity underscores the resilience of Oroko cultural systems.

The central research question guiding this study is: How do Oroko traditional symbols function as cultural technologies that shape leadership, identity, and social order? To answer this question, the study employs a qualitative ethnographic approach, drawing on interviews, participant observation, and symbolic analysis. The findings reveal that Oroko symbols operate as sophisticated technologies that encode cultural knowledge, regulate social behavior, and legitimize authority.

This article contributes to three key areas of scholarship. First, it expands the field of Cultural Technology by demonstrating how indigenous African symbols function as technologies that structure social life. Second, it enriches material culture studies by highlighting the active role of objects in shaping identity and authority. Third, it advances Indigenous Knowledge Systems (IKS) scholarship by documenting the intellectual sophistication embedded in Oroko cultural practices.

The article is structured as follows. The next section provides a detailed background to the study, situating Oroko symbolism within its historical and cultural context. This is followed by a problem statement that outlines the need for scholarly reinterpretation of indigenous symbols as cultural technologies. The literature review examines key theoretical frameworks, including Cultural Technology, under which there Cultural Technology is operationalized, material culture theory, semiotics, and Indigenous Knowledge Systems. The methodology section describes the qualitative ethnographic approach used in the study. The findings and discussion section analyze the “iso” and neck beads as cultural technologies. The article concludes with recommendations for preserving and revitalizing Oroko cultural symbols.

By reinterpreting Oroko symbols as cultural technologies, this study challenges Western-centric definitions of innovation and highlights the intellectual richness of African indigenous systems. It argues that understanding these symbols as technologies provides deeper insight into how the Oroko organize social life, transmit knowledge, and sustain cultural identity

Background to the Study

The Oroko people, located primarily in Ndian and part of Meme Divisions of the South West Region of Cameroon, constitute one of the oldest ethnic groups in the region, with a cultural heritage deeply rooted in symbolism, ritual practice, and indigenous knowledge systems. Their social organization, political structures, and cosmological beliefs are expressed through a rich tapestry of material and immaterial symbols that guide everyday life and encode communal values (Nkwi & Warnier, 1982). Among these symbols, the “iso”, and the neck beads worn by chiefs stand out as central markers of identity, authority, and cultural continuity.

The “iso” is a significant cultural symbol. It is made from raffia palms. It functions as a visual marker of fertility, beauty, authority, and leadership identity. The “iso”’s colors, patterns, and method of wearing communicate specific messages about rank, purity, and legitimacy. Textile symbolism has long been recognized as a powerful medium of communication in African societies, where cloth often signifies status, moral authority, and spiritual power (Picton & Mack, 1989). Among the Oroko, the “iso” is imbued with ancestral significance, linking the wearer to the family ancestors and reinforcing his/her role as the custodian of tradition.

The neck beads or mesanga worn by chiefs serve as both spiritual and political technologies. Beads have historically played important roles in African societies as markers of wealth, lineage, and spiritual protection (Insoll, 2011). In Oroko culture, specific beads are reserved exclusively for chiefs and are believed to carry protective powers bestowed by ancestors. The beads also function as historical archives, with each bead representing a significant event, lineage, or achievement. This aligns with broader African traditions in which beads serve as repositories of memory and identity (Kreamer, 1990). These symbols are deeply embedded in Oroko cosmology and social organization. They are used in rituals, ceremonies, and everyday practices that reinforce communal values and social cohesion. They also serve as technologies of governance, regulating behavior and legitimizing authority. For example, the beads are used during chieftaincy rituals to invoke ancestral blessings. While the “iso” asserts the wearer’s fertility, beauty, and connection with their culture and ancestors, the beads assert the chief’s authority and spiritual mandate.

However, the meanings and uses of these symbols have evolved over time. The introduction of Christianity, Western education, and globalization has reshaped Oroko cultural practices, leading to new interpretations and adaptations of traditional symbols. Some youths view these symbols as outdated or incompatible with modern lifestyles, while others embrace them as markers of cultural identity and resistance to cultural erosion. Chiefs and elders often find themselves negotiating between tradition and modernity, adapting symbols to maintain relevance in contemporary contexts (Geschiere, 1997).

Despite these changes, Oroko symbols remain central to the community's identity and social organization. They continue to function as cultural technologies that encode knowledge, regulate behavior, and sustain cultural continuity. Understanding these symbols as technologies rather than mere artifacts provides deeper insight into the intellectual sophistication of Oroko cultural systems and challenges Western-centric definitions of technology.

Problem Statement

Although Oroko traditional symbols play crucial roles in governance, identity formation, and cultural continuity, they are often misunderstood or undervalued in contemporary discourse. Western conceptions of technology tend to prioritize mechanical, industrial, or digital innovations, marginalizing indigenous symbolic systems that function as technologies in their own right (Pfaffenberger, 1992). This epistemological bias contributes to the erasure of African intellectual traditions and undermines the value of indigenous knowledge systems. Despite their significance, Oroko cultural symbols remain understudied in academic literature. Much of the existing scholarship on African symbolism focuses on broader ethnic groups or pan-African cultural patterns, often overlooking the localized and nuanced meanings embedded in specific communities (Turner, 1967). In academic literature, African symbols are frequently treated as decorative or ritualistic artifacts rather than functional technologies. This limited perspective fails to recognize the technological logic embedded in these symbols and their role in structuring social life. For example, “iso” and the beads are often dismissed as cultural ornaments rather than technologies of beauty, fertility, authority, identity, cultural connection, and spiritual protection.

The lack of scholarly attention to Oroko symbols has practical implications for cultural preservation. As modernization, Christianity, and globalization reshape cultural practices, traditional symbols risk being misunderstood, devalued, or abandoned. Younger generations may fail to appreciate the cultural and technological significance of these symbols, leading to cultural erosion and loss of indigenous knowledge. Chiefs and elders often express concern that the meanings of traditional symbols are being lost or distorted, threatening the continuity of Oroko cultural identity. Furthermore, the absence of research on Oroko symbols limits broader academic understanding of African cultural technologies. While scholars have documented symbolic systems in other African societies, such as the Ndembo (Turner, 1967) and the Yoruba (Drewal, 1992), there is a significant gap in the literature on the Oroko. This gap not only marginalizes Oroko cultural heritage but also limits comparative studies that could enrich theoretical frameworks in anthropology, material culture studies, and Indigenous Knowledge Systems.

There is therefore a pressing need to reinterpret Oroko traditional symbols through a framework that recognizes their technological logic and cultural sophistication. By analyzing the “iso” and neck beads as cultural technologies, this study seeks to fill a critical gap in the literature and contribute to the preservation and revitalization of Oroko cultural heritage.

LITERATURE REVIEW

The literature on African symbolism, cultural technology, and Indigenous Knowledge Systems (IKS) provides a rich foundation for understanding the technological logic embedded in Oroko traditional symbols. This review examines four major bodies of scholarship relevant to the study: (1) Cultural Technology, (2) Material Culture, (3) Semiotics and Symbolism, and (4) Indigenous Knowledge Systems. Together, these frameworks illuminate how symbols such as the “iso” and neck beads function as technologies that structure social life, encode authority, and sustain cultural identity.

Cultural Technology

The concept of Cultural Technology challenges the narrow Western definition of technology as purely mechanical or digital. Instead, it expands the notion to include symbolic, ritual, and social systems that enable societies to organize themselves and solve collective problems. Pfaffenberger (1992) argues that technology is fundamentally a sociocultural phenomenon, shaped by human intentions, values, and power relations. He emphasizes that tools and symbols are embedded in social systems and cannot be understood apart from their cultural contexts. This broader understanding of technology is essential for analyzing African symbolic systems. Scholars such as Ferguson (2019) and Comaroff and Comaroff (1991) have shown that African societies employ complex cultural technologies to regulate social behavior, transmit knowledge, and maintain political authority. These technologies include ritual practices, kinship structures, initiation systems, and symbolic objects.

In the context of the Oroko, the “iso” and neck beads can be understood as cultural technologies that encode social norms, cosmological beliefs, and leadership structures. This aligns with Pfaffenberger’s (1992) argument that technology is a “total social phenomenon” that integrates material, symbolic, and social dimensions. Similarly, the “iso” and beads worn by chiefs function as technologies of authority and identity. They communicate beauty, fertility, rank, legitimacy, and spiritual power, shaping how individuals perceive and interact with leadership. This reflects Ferguson’s (2019) observation that African political systems often rely on symbolic technologies to assert authority and maintain social cohesion.

Operationalizing Cultural Technology: An Anthropological Perspective

The concept of cultural technology extends conventional understandings of technology beyond mechanical devices and digital innovations to encompass the symbolic, ritual, material, and social mechanisms through which communities organize collective life, preserve knowledge, and reproduce cultural values. Rather than viewing technology solely as an instrument of industrial production, cultural technology recognizes that societies also develop culturally embedded systems that perform regulatory, educational, political, and spiritual functions. This broader interpretation is particularly relevant in African contexts, where material objects and ritual practices frequently serve as mechanisms for governance, identity formation, and social cohesion.

Pfaffenberger (1992) provides one of the most influential theoretical foundations for this perspective by arguing that technology is fundamentally a “total social phenomenon.” Drawing on anthropological traditions established by Marcel Mauss, he contends that technologies cannot be separated from the cultural, political, and symbolic systems within which they operate. Every technological object simultaneously embodies material functions, social relations, systems of meaning, and power structures. Technology is therefore not merely a collection of tools but an institutionalized cultural practice through which societies organize everyday life.

This understanding resonates strongly with Pierre Bourdieu’s theory of habitus, which explains how cultural practices become embodied through repeated social action. From Bourdieu’s perspective, the “iso” and chiefly beads are not passive artefacts but forms of embodied cultural knowledge that reproduce Oroko social order across generations. Their meanings are learned through participation in domestic life, initiation ceremonies, traditional governance, and everyday social interactions. Consequently, these cultural symbols function as technologies because they regulate behaviour, reinforce social norms, and shape communal identities.

Similarly, Clifford Geertz’s interpretive anthropology views culture as a system of symbols through which people communicate meaning and make sense of their world. The symbolic significance of the “iso” extends beyond its physical role of showing beauty; it communicates ideas of unity, continuity, kinship, hospitality, and ancestral presence. Likewise, chiefly beads and ceremonial attire constitute symbolic texts that communicate authority, legitimacy, prestige, and spiritual responsibility. Their technological value therefore lies not in mechanical efficiency but in their capacity to encode and transmit culturally shared meanings.

The concept also aligns with Bruno Latour’s Actor-Network Theory, which rejects the distinction between material objects and social actors. Latour argues that objects actively participate in shaping human relationships and institutional practices. Applying this perspective, the “iso”, ceremonial fabrics, and chiefly beads become

active participants in the production of social order rather than passive cultural artefacts. They influence behaviour, structure social interactions, legitimate authority, and sustain communal memory.

Within African scholarship, the works of Ferguson (2019) and Comaroff and Comaroff (1991) similarly demonstrate that indigenous societies employ symbolic institutions as technologies of governance, identity formation, and political legitimacy. Ritual performances, kinship systems, sacred spaces, dress codes, and material symbols constitute institutional mechanisms through which communities maintain order and negotiate authority. The Oroko cultural symbols examined in this study fit squarely within this broader African understanding of technology as a culturally embedded system of social organization.

For the purposes of this study, cultural technology is operationalized as the observable social, symbolic, political, educational, and spiritual functions performed by indigenous cultural symbols within Oroko society. It is examined through four interrelated dimensions:

Operational Dimension	Observable Indicators	Application to Oroko Cultural Symbols
Knowledge transmission	Teaching history, customs, moral values, indigenous knowledge	“Iso” as an instructional tool on cultural link between the living and the ‘living dead’, apprenticeship, and intergenerational learning
Political authority	Legitimizing leadership, communicating rank, reinforcing governance	Chiefly beads and ceremonial attire signifying authority, legitimacy, and traditional office
Spiritual mediation	Facilitating rituals, ancestral remembrance, cosmological beliefs	“Iso” serving ritual functions and maintaining symbolic links with ancestors
Identity construction	Expressing collective identity, heritage, prestige, and cultural continuity	“Iso” and beads representing Oroko identity, status, and cultural belonging

Operationally, therefore, cultural technology in this study is not measured by technical efficiency but by the extent to which indigenous symbols transmit knowledge, legitimize political authority, sustain spiritual beliefs, and preserve collective identity. Data generated through interviews, focus group discussions, participant observation, and documentary analysis were interpreted according to these five dimensions.

By integrating Pfaffenberger's conception of technology as a total social phenomenon with Bourdieu's theory of habitus, Geertz's symbolic anthropology, and Latour's Actor-Network Theory, this study demonstrates that the Oroko “iso” and chiefly beads are not merely cultural artefacts but sophisticated indigenous technologies that sustain governance, social cohesion, and cultural continuity.

Material Culture

Material culture theory provides another important lens for understanding Oroko symbols. Material culture scholars argue that objects are not passive artifacts but active participants in social life. Miller (2005) asserts that material objects “make people” by shaping identity, memory, and social relations. This perspective challenges the assumption that objects merely reflect culture; instead, they actively produce and reproduce cultural meanings. African material culture has been extensively studied, with scholars highlighting the central role of objects in expressing identity, status, and cosmology. Picton and Mack (1989) demonstrate that African textiles function as powerful communicative devices, conveying messages about social rank, moral authority, and spiritual power. Similarly, Kreamer, (1990) shows that African beads serve as repositories of memory, lineage, and identity.

In Oroko society, the “iso” and chiefly beads exemplify the active role of material objects in shaping social relations. The “iso”’s colors and patterns communicate specific messages about leadership status, while the beads signify lineage, spiritual protection, and political legitimacy. These objects are not merely decorative; they are technologies that structure social interactions and reinforce authority. This aligns with Miller’s (2005) argument that material objects embody cultural logics and shape human behavior.

Semiotics and Symbolism

Semiotics, the study of signs and symbols, provides a framework for decoding the meanings embedded in Oroko cultural symbols. Barthes (1972) argues that symbols function as “myths” that naturalize cultural values and power structures. They communicate layered meanings that shape how individuals perceive the world.

In African societies, symbols play central roles in expressing cosmological beliefs, social hierarchies, and moral values. Turner’s (1967) work on the Ndembu demonstrates how ritual symbols encode complex cultural meanings and mediate social transitions. He argues that symbols are multi-vocal, carrying multiple meanings that resonate with different members of the community. The “iso” and beads function as semiotic devices. Their colors, patterns, and arrangements communicate messages about rank, purity, and legitimacy. Barthes’ (1972) concept of myth is particularly relevant here: as the beads naturalize the chief’s authority, making it appear self-evident and culturally ordained.

Semiotics also helps explain how symbols evolve over time. As Oroko society interacts with Christianity, Western education, and globalization, the meanings of traditional symbols shift. Some youths reinterpret the symbols as cultural heritage rather than spiritual technologies, while others reject them as incompatible with modern lifestyles. This dynamic process reflects Barthes’ (1972) argument that symbols are constantly reinterpreted within changing cultural contexts.

Indigenous Knowledge Systems (IKS)

Indigenous Knowledge Systems (IKS) scholarship highlights the intellectual sophistication embedded in African cultural practices. Hountondji (1997) argues that African knowledge systems are dynamic, empirical, and deeply rooted in local contexts. They encompass ecological knowledge, healing practices, governance systems, and symbolic technologies. IKS scholars emphasize that indigenous technologies are not primitive but highly adapted to local environments and social needs. For example, fire technologies in African societies are often linked to cosmology, agriculture, and social organization (Mbiti, 1990). Textile and bead systems encode lineage, identity, and spiritual power (Insoll, 2011).

The “iso” and beads fit squarely within IKS frameworks. The three-stone fire is a technological system developed through centuries of cultural engineering, optimized for cooking, heating, and ritual communication. “Iso” is a technology linked with traditional beauty, fertility, and link between the living and the dead while the beads are technologies of governance and identity, linking chiefs to ancestral lineages and legitimizing their authority.

IKS also emphasizes the importance of oral traditions in transmitting knowledge. Oroko elders often explain the meanings of symbols through stories, proverbs, and rituals. This aligns with Wiredu’s (2004) argument that African knowledge systems are embedded in communal practices and transmitted through lived experience. However, IKS scholars also warn that modernization threatens the continuity of indigenous knowledge. As younger generations adopt Western lifestyles, traditional symbols risk being misunderstood or abandoned. This concern is echoed in Oroko communities, where elders worry that the meanings of symbols are being lost. Documenting and analyzing these symbols as cultural technologies is therefore essential for preserving Oroko cultural heritage.

Theoretical Framework

This study draws on three complementary perspectives—Material Culture Theory, Semiotics, and Indigenous Knowledge Systems (IKS)—to explain Oroko traditional symbols as active cultural technologies. Together, these approaches show how “iso” and chiefs’ neck beads shape identity, authority, and social life.

Material Culture Theory

Material Culture Theory argues that objects are not passive items but active forces in society. They help shape behavior, memory, identity, and social relationships (Miller, 2005). In Oroko society, traditional symbols do more than represent culture; they organize and reinforce it. The three-stone fire structures domestic life, cooking practices, and communal interaction while symbolizing balance and interdependence. “iso” communicates status, legitimacy, and leadership, functioning as a visible sign of authority (Picton & Mack, 1989). The neck beads signify lineage, protection, and political legitimacy, shaping how chiefs are perceived (Kreamer, 1990).

Semiotics

Semiotics studies how signs and symbols communicate meaning. According to Barthes (1972), symbols often naturalize cultural values, making them appear normal or unquestioned. In Oroko culture, the three-stone fire is a multivocal symbol with meanings linked to family unity, lineage, and cosmology (Turner, 1967). The chief’s “iso” communicates purity, legitimacy, and leadership identity, while the beads symbolize ancestry, spiritual power, and authority (Insoll, 2011). Semiotics also helps explain how these meanings change over time under Christianity, modernization, and globalization.

Indigenous Knowledge Systems (IKS)

IKS recognizes African knowledge systems as sophisticated, practical, and locally grounded (Hountondji, 1997). Indigenous technologies are adapted to environmental, social, and spiritual needs. The “iso” and beads function as technologies of governance, identity, and continuity, transmitting cultural knowledge through rituals and oral traditions (Wiredu, 2004). Despite modernization, these symbols remain important markers of Oroko identity.

These three theories provide a strong framework for understanding Oroko symbols as more than decorative traditions. They are functional technologies that communicate meaning, preserve knowledge, and sustain authority within Oroko society.

METHODOLOGY

Data Collection Methods

Data were collected through multiple qualitative techniques to ensure triangulation and enhance credibility. Semi-structured interviews were conducted with chiefs, elders, traditional council members, and cultural custodians to explore the meanings, functions, and contemporary relevance of Oroko cultural symbols. Focus group discussions were held with women leaders, youth representatives, and mixed community groups to capture collective perspectives on cultural practices and identity. Participant observation was undertaken during traditional ceremonies, palace meetings, domestic activities, and cultural festivals, including performances by traditional dance groups. This enabled the researcher to document the practical use and symbolic meanings of “iso” and chiefly beads within their natural cultural contexts. Photographic documentation of these cultural artefacts was undertaken with participants' consent, while archival materials—including palace records, oral histories, and community cultural documents—were reviewed to corroborate interview and observational data. Ethnography was appropriate because it allows an in-depth understanding of cultural meanings, rituals, and indigenous knowledge from the perspective of community members (Creswell & Poth, 2018).

Research Design

A qualitative ethnographic design was used to observe social practices, interpret symbolic meanings, and understand how Oroko objects function within everyday life. This approach enabled the researcher to study symbols in their natural settings rather than as isolated artifacts.

Study Area

The research was conducted in Ndian and Meme Divisions, South West Region of Cameroon, home to several Oroko communities. The area was selected because of its active chieftaincy institutions and continuing traditional practices.

Population and Sampling

The study population comprised traditional authorities and community members with extensive knowledge of Oroko cultural practices and symbolism. These included chiefs, elders, traditional council members, women leaders, youth representatives, cultural custodians, and members of traditional dance groups who participated in cultural performances.

A combination of purposive and snowball sampling techniques was employed. Purposive sampling enabled the selection of participants with specialized knowledge of Oroko cultural symbols, while snowball sampling facilitated the identification of additional knowledgeable informants recommended by the initial participants.

The study involved a sample size of 32 key informants, consisting of 6 chiefs, 8 elders, 5 traditional council members, 5 women leaders, 4 youth representatives, and 4 cultural custodians. In addition, three traditional dance groups were observed during cultural performances to document the ceremonial use and symbolic significance of indigenous attire within communal settings. The dance groups served as sources of observational data and were not included in the participant count.

Demographic Background of Interview Participants

The study involved 32 participants purposively selected for their knowledge of Oroko cultural traditions and indigenous symbolism. Participants represented diverse social roles within the community to ensure a broad range of perspectives on the meanings and functions of “iso” and chiefly beads.

Table 1. Demographic Characteristics of Participants (N = 32)

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	20	62.5
	Female	12	37.5
Age	30–39 years	3	9.4
	40–49 years	5	15.6
	50–59 years	9	28.1
	60–69 years	8	25.0
	70 years and above	7	21.9
Participant Category	Chiefs	6	18.8
	Elders	8	25.0
	Traditional council members	5	15.6
	Women leaders	5	15.6
	Youth representatives	4	12.5
	Cultural custodians	4	12.5
Educational Level	Primary	8	25.0
	Secondary	11	34.4
	Tertiary	13	40.6

Years of Cultural Experience	5–10 years	4	12.5
	11–20 years	8	25.0
	21–30 years	9	28.1
	More than 30 years	11	34.4

Narrative Description

The study interviewed 32 participants, comprising 6 chiefs, 8 elders, 5 traditional council members, 5 women leaders, 4 youth representatives, and 4 cultural custodians. The sample included 20 men (62.5%) and 12 women (37.5%), reflecting the predominance of men in traditional leadership while ensuring the inclusion of women who play significant roles in cultural preservation and transmission.

Participants ranged in age from 30 to over 70 years, with the majority (75%) aged 50 years and above. This age distribution was appropriate because older participants generally possessed extensive knowledge of Oroko customs, rituals, and symbolic traditions accumulated over many decades. Educational backgrounds varied, with 40.6% having attained tertiary education, 34.4% secondary education, and 25.0% primary education. This diversity allowed the study to capture both indigenous understandings and contemporary interpretations of cultural symbols.

In terms of cultural experience, most participants had been actively involved in traditional institutions and community cultural practices for more than two decades, with 34.4% reporting over 30 years of experience. Their long-standing engagement enhanced the credibility and richness of the data collected on the historical, symbolic, and social significance of the three-stone fireplace, neck fabric, and chiefly beads in Oroko society.

Data Analysis

Data were analyzed using thematic analysis (Braun & Clarke, 2006) to identify key themes such as authority, identity, cosmology, and cultural resilience. Semiotic analysis was also used to interpret colors, patterns, and symbolic meanings, while material culture analysis examined how objects shape behavior and social relations.

Ethical Considerations

Ethical approval was obtained from local authorities and community leaders. Participants gave informed consent, confidentiality was maintained, and sacred cultural knowledge was treated with respect. Special care was taken when documenting restricted objects such as ceremonial beads.

The “iso” as a Technology of Authority



Pic 1: The Kumba City Mayor during his initiation to the top secret society in Bakundu land and the “iso” worn on his waist is different in colour, showing he has just been initiated into a secret society.

Pic 2: The researcher with her “nwea” on her neck. This is not ordinary “iso”. The “nwea”, despite having the same colour like “iso” is worn only by the initiated women into the top male secret society in the land. This

distinguishes her from other women of the clan. Ordinarily, other women wear white “nwea” for dancing purposes only.

Pic 3: A traditional dancer adorned in her “iso”. The dancers wear it to connect traditionally and spiritually with the culture and ancestors, and for beauty purposes.

Pic 4: A woman in her mourning regalia with “iso” on her head. This indicates that even mourning attracts traditional rituals that culturally connect the living and the dead, especially if the deceased was an old person as was this case.

Material Culture and Identity

“Iso” is also worn by Oroko chiefs as a powerful material technology that communicates authority, purity, and leadership identity. The “iso” is typically woven in bold colors—orange and white, each carrying symbolic meaning. While orange signifies vitality and ancestral power; white represents purity and moral authority. This aligns with Picton and Mack’s (1989) argument that African textiles function as communicative devices that encode social status and moral values. The “iso”’s materiality—its texture, color, and pattern—shapes how community members perceive the wearer.

Semiotic Analysis

Semiotically, “iso” functions as a signifier of legitimacy. Barthes’ (1972) concept of myth helps explain how the “iso” naturalizes the wearer’s authority. When a chief wears “iso”, his leadership appears culturally ordained rather than socially constructed. During interviews, some elders emphasized that the “iso” is not merely decorative: “The cloth is the chief. Without it, he is just a man.” This statement reflects the material culture principle that objects actively shape identity (Miller, 2005). “Iso” transforms the chief into a symbolic figure who embodies the community’s values.

Ritual Restrictions and Protocols: The “nwea” is subject to strict protocols: Firstly, only the initiated woman into the male sacred society and those who rank as such may carry the white colour type, usually called “nwea” and which is used to brush the highest masquerade “njoku” during its performance. This “nwea” must be ritualized by the eldest member of the secret society before use. It is used during rituals, palace meetings, and public ceremonies. It must not be exposed within the reach of the non-initiates, as this is believed to offend the ancestors. This symbol does not only individualize the wearer, it connects him/her to the spiritual world and elevates him/her to a particular status in the land.

These restrictions reinforce “nwea”’s sacred status and its role as a governance technology. The protocols also reflect Indigenous Knowledge Systems, where objects are imbued with spiritual power and must be handled with care (Wiredu, 2004).

Modern Transformations

Modern influences have led to new interpretations of “iso”. Some chiefs incorporate contemporary “iso” designs, blending tradition with modern aesthetics. Youths often view “iso” as a symbol of cultural pride rather than spiritual authority, reason why most of them wear it during dance performances. This shift reflects Barthes’ (1972) argument that symbols evolve as cultural contexts change.

The Chiefly Beads (“Mesanga”) as a Technology of Power and Memory



A cross section of Bakundu chiefs in their traditional neck beads during a traditional ceremony

Material and Historical Dimensions

The neck beads worn by Oroko chiefs are among the most sacred cultural objects in the community. Beads vary in color, size, and material, with some made from glass, bones, seeds, or imported trade beads. Each bead carries historical significance, often representing: a lineage, a major event, a spiritual achievement or a political alliance. This aligns with Kremer's (1990) argument that African beads serve as repositories of memory and identity. The beads function as a material archive, preserving Oroko history through tangible objects.

Semiotic and Spiritual Functions

Semiotically, beads signify authority, spiritual protection, and ancestral connection. Chiefs explained that certain beads are believed to contain ancestral power, offering protection against harm. This reflects Insoll's (2011) observation that beads in African societies often serve as spiritual technologies. One chief stated: "These beads are not for beauty. They carry the voices of those who ruled before." This reinforces the idea that beads are technologies of memory and authority.

Governance and Social Regulation

Beads also function as governance technologies. Only chiefs or designated custodians may wear specific beads. Unauthorized use is considered a serious offense and sacrilege believed to provoke ancestral punishment and that may need cleansing. This regulatory function aligns with Pfaffenberger's (1992) argument that technologies are embedded in social systems and power relations.

Continuity and Change

While some beads are centuries old, others are newly crafted. Chiefs often combine old and new beads, symbolizing continuity and adaptation. Youths expressed admiration for the beads as cultural heritage, even if they do not fully understand their spiritual significance. This reflects Hountondji's (1997) argument that Indigenous Knowledge Systems evolve while retaining core values.

Cross-Symbol Analysis: Cultural Technology in Practice

Across the two symbols, several themes emerged. First, the theme of symbols as active agents consistent with material culture theory shows that the symbols actively shape social behavior, identity, and authority (Miller, 2005). These symbols are not passive artifacts but technologies that structure social life. They carry multiple meanings that resonate with different community members, reflecting Turner's (1967) concept of multi-vocality, as well as they function as governance technologies, legitimizing authority and regulating social behavior (Pfaffenberger, 1992). In terms of cultural resilience, despite modernization, the symbols remain central to Oroko identity, demonstrating the resilience of Indigenous Knowledge Systems (Hountondji, 1997).

FINDINGS AND DISCUSSION

"Iso" as a Cultural Technology of Authority

The findings demonstrate that "iso" functions not merely as ceremonial attire but as a cultural technology that institutionalizes authority within Oroko society. Rather than deriving legitimacy solely from the individual, authority is materially constituted through "iso", whose colors, patterns, and ritual restrictions communicate political legitimacy, ancestral sanction, and moral responsibility. Status therefore becomes materially embodied rather than simply proclaimed.

Interview narratives consistently indicated that "iso" transforms ordinary persons into socially recognized custodians of communal traditional authority. The frequently repeated assertion by respondents that "the cloth is the chief" or "the cloth is the wearer" illustrates that authority is inseparable from its material representation. This finding supports Pfaffenberger's (1992) proposition that technologies operate as social systems through which power is produced and reproduced, while simultaneously extending material culture theory by demonstrating that indigenous textiles function as institutional technologies rather than decorative objects.

The semiotic significance of “iso” further reinforces this interpretation. Different colors encode distinct cultural values, allowing the cloth to communicate political rank, ritual purity, fertility, or ancestral legitimacy without verbal explanation. In this sense, “iso” operates as a visual language whose meanings are collectively understood within the community. Barthes' (1972) concept of myth is particularly useful here because the symbolic authority conveyed by the cloth appears natural and unquestionable, thereby legitimizing traditional governance through culturally accepted symbolism.

Ritual regulations surrounding “iso” similarly illustrate that material objects become technologies through culturally prescribed practices. Restrictions concerning who may wear particular artefacts such as “nwea”, when they may be worn, and how such artefacts should be handled, demonstrate that technological effectiveness derives from social regulation rather than material composition. These protocols reproduce social hierarchy while safeguarding sacred knowledge, illustrating the close relationship between material culture, ritual practice, and political organization.

Although younger generations increasingly associate “iso” with cultural identity rather than exclusively with spiritual authority, this transformation does not necessarily signify cultural decline. Instead, it reflects the adaptive capacity of indigenous technologies to accommodate changing social contexts while preserving their symbolic significance. Cultural technology therefore emerges as dynamic rather than static, continually negotiating continuity and change.

Chiefly Beads (“Mesanga”) as Technologies of Memory and Political Power

The findings indicate that chiefly beads perform multiple interconnected functions that extend beyond ornamentation. They serve simultaneously as repositories of historical memory, markers of political legitimacy, and instruments of spiritual authority. Their significance therefore lies less in their physical characteristics than in the historical and symbolic relationships they embody.

Participants consistently associated particular beads with ancestral lineages, historical events, political alliances, and inherited responsibilities. The beads consequently function as mnemonic technologies through which collective memory is materialized and transmitted across generations. This supports Kremer's (1990) argument that African material objects often preserve historical knowledge outside written archives.

The spiritual dimension of the beads further illustrates the inseparability of materiality and belief within indigenous knowledge systems. Participants described certain beads as possessing protective capacities inherited from ancestors, suggesting that their effectiveness depends upon communal recognition of their sacred status rather than intrinsic physical properties. This finding reinforces Insoll's (2011) observation that African ritual objects mediate relationships between the physical and spiritual worlds.

Equally significant is the regulatory role of the beads. Their restricted ownership establishes clear boundaries between legitimate and illegitimate authority. Because only designated custodians may possess or wear particular beads, the objects function as mechanisms for regulating political succession and maintaining institutional continuity. In this respect, authority is materially authenticated through culturally sanctioned objects rather than bureaucratic documentation, reinforcing Pfaffenberger's (1992) understanding of technology as embedded within systems of power.

The coexistence of inherited and newly crafted beads also demonstrates that indigenous technologies evolve through adaptation rather than replacement. While material forms may change over time, their symbolic functions remain remarkably stable, ensuring continuity of cultural identity amid broader processes of social transformation.

Cultural Technology in Practice

Viewed collectively, “iso” and chiefly beads reveal that cultural technology within Oroko society operates through the interaction of material objects, symbolic meanings, ritual practices, and institutional authority. Their significance lies not in their individual material forms but in the social relationships they organize and sustain.

First, the findings challenge conventional understandings of technology as exclusively mechanical or industrial. Both symbols perform technological functions by regulating behaviour, legitimizing authority, preserving collective memory, and transmitting indigenous knowledge. Their effectiveness therefore derives from social recognition rather than technical efficiency, supporting Pfaffenberger's (1992) argument that technology constitutes a total social phenomenon.

Second, the findings reveal that these symbols possess multiple, context-dependent meanings. Chiefs, elders, women, and youths interpret the same objects differently while nevertheless recognizing their shared cultural significance. This multi-vocality confirms Turner's (1967) proposition that symbols derive their power from their capacity to accommodate diverse yet complementary interpretations within a single cultural system.

Third, the study demonstrates that material culture actively participates in governance. Rather than merely reflecting political authority, “iso” and beads help produce, maintain, and legitimize it. Authority is therefore enacted through culturally recognized material practices, illustrating that governance in indigenous societies is inseparable from symbolic technologies.

Finally, the findings underscore the resilience of Oroko indigenous knowledge systems. Although modernization has altered the contexts in which these symbols are used, their core functions as mechanisms of identity formation, political legitimacy, and cultural continuity remain intact. Adaptation has therefore strengthened rather than diminished their relevance, demonstrating that indigenous cultural technologies possess considerable capacity for renewal while maintaining continuity with ancestral traditions.

Overall Interpretation

Taken together, these findings support the central argument of this study: “Iso” and chiefly beads should be understood not simply as cultural artefacts but as indigenous cultural technologies that organize social life, regulate authority, preserve collective memory, and sustain Oroko identity. Their technological significance lies in their ability to integrate material form, symbolic meaning, ritual practice, and institutional power into a coherent system of cultural governance. By foregrounding these functions, the study contributes to broader anthropological debates by demonstrating that African indigenous societies possess sophisticated technologies whose effectiveness resides in symbolic and social organization rather than mechanical innovation. This analytical perspective also broadens prevailing conceptions of technology, affirming that indigenous material culture constitutes an important domain of technological knowledge deserving greater recognition within contemporary scholarship.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined “iso” and neck beads (“mesanga”) of the Oroko people as cultural technologies that sustain authority, identity, and social order in Nnian and Meme Divisions. Guided by Material Culture Theory, Semiotics, and Indigenous Knowledge Systems, the findings demonstrate that these symbols are not mere artifacts, but dynamic institutions that continue to shape Oroko society “iso” represents spirituality, legitimacy, purity, and continuity, while the “mesanga” symbolize leadership, memory, spiritual protection, lineage, and power and political authority. Collectively, these symbols shape identity, regulate behavior, carry multiple meanings across domestic and political contexts, legitimize traditional authority, and show resilience through adaptation to modernization. Although Christianity, globalization, and changing youth perceptions pose challenges, many younger people still value these symbols as markers of cultural identity. Ultimately, Oroko symbols should be recognized as sophisticated indigenous technologies that address social, spiritual, and political needs. Their preservation and documentation are essential for sustaining Oroko cultural heritage and affirming the value of African knowledge systems.

Recommendations

To preserve and revitalize Oroko cultural technologies, indigenous knowledge should be integrated into school curricula across Oroko communities and the wider Southwest Region. Teaching the meanings and functions of

“iso” and neck beads can promote cultural pride among younger generations and prevent the loss of traditional knowledge. Community-based documentation should also be encouraged through collaboration between chiefs, elders, cultural associations, and researchers. Such efforts may include written records, audio-visual materials, and digital archives that accurately reflect local perspectives and cultural values. Traditional institutions should be supported in preserving and adapting these symbols to contemporary realities. Chiefs, as custodians of culture, require institutional and community support to sustain cultural continuity. Youth participation should be promoted through festivals, workshops, and mentorship programs to ensure intergenerational knowledge transfer. In addition, cultural heritage centers in Ndian and Meme Divisions could serve as spaces for preservation, education, tourism, and research. Scholars should further pursue interdisciplinary studies on African cultural technologies, while chiefs and elders establish ethical guidelines to protect sacred knowledge and regulate what may be publicly shared.

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