

AI and Colour Symbolism in Nigerian Religions: A Religio-Ethical Study

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Abstract

This study investigates how Artificial Intelligence (AI) is influencing the interpretation and application of religious colour symbolism in Nigeria, focusing on Christianity, Islam, and African Traditional Religion. Colours have long carried deep theological, ritual, and cultural significance in these traditions, yet digital technologies now shape how they are presented and perceived. The research examines the extent to which AI tools affect colour selection in religious texts, worship environments, and digital media, and how these choices may overlook indigenous cultural meanings. A qualitative approach was employed, using interviews, observations, and visual analysis. Participants included 30 Christian clergy and worship leaders (Anglican, Catholic, Pentecostal, and Aladura), 30 Muslim scholars and religious artists, 30 traditional practitioners rooted in Yoruba heritage, and 30 designers or software users engaged in AI-driven cultural projects. Purposive sampling ensured the involvement of individuals with direct experience in religious symbolism and familiarity with technological applications. Findings reveal significant differences across generations, denominations, and urban–rural contexts. Younger and urban participants tended to favour visually attractive and commercially oriented colour schemes, sometimes at the expense of sacred meaning. This has generated tensions between theological interpretation and media appeal, as well as concerns about cultural displacement and the transfer of symbolic authority from religious leaders to software developers. The study concludes that AI can contribute positively to the preservation and renewal of religious symbolism if informed by cultural sensitivity and theological insight. It proposes an ethical framework for integrating AI into religious practice while safeguarding Nigeria's diverse spiritual heritage.

Keywords: African Religions, Artificial Intelligence, Christianity, Islam, Nigeria, Religious Colour, Symbolism.

Introduction

The human brain naturally incorporates sensory experiences, as individuals associate colours, shapes, and sounds with distinct flavours. This can slightly influence their perceptual experience, as evidenced by the way the colour of glasses, clothes, or music affects sweetness, mood, and environments. Recent research indicates that generative artificial intelligence systems may also accomplish this; however, this is primarily owing to biases in the data on which they were trained (Robsin, 2024). This study explores the intersection of Artificial Intelligence (AI), colour, and symbolism in Nigerian socio-cultural

and religious practices. Recently, AI has been used to enhance education, medicine, communication, entertainment, and arts in Nigeria (Ogunbiyi & Oyebanji, 2025), but it raises questions about its ability to interpret meanings influenced by indigenous traditions and religious worldviews. In Nigeria, colour is not static but open to negotiation across groups, representing identity, history, custom, and belief. Colour symbolism, the connection of colour with abstract or religious values, has been a part of Nigerian life before the arrival of Christianity, Islam, or colonialism. Undoubtedly, new religions have added new layers, creating overlap and conflict in Nigeria. For example, white represents purity in Christianity, sacredness in Yoruba traditional belief, and spiritual cleanliness in Islam. For example, red symbolises vitality and danger in Igbo society, sacrifice in Yoruba rituals, and the blood of Christ in Christianity. In Islam, it can suggest divine authority and justice (Banjo, 2019; Adekoya, 2014). The question remains whether AI outputs can capture these multiple layers or reduce them to simplified global or Western patterns that ignore Nigerian and religious contexts. Recent AI developments have deepened the debate, with algorithms now identifying images, recognising colour patterns, and suggesting cultural palettes for branding and design in Nigerian churches, mosques, and businesses. However, tension remains when global AI systems encounter Nigerian symbolic diversity (Iheanacho, 2014; Gomes, 2024; Duan & Gong, 2024; Cui, 2025). The comparative challenge lies in how AI systems reinterpret colour symbolism across Christianity, Islam, and African Traditional Religion in Nigeria. While AI allows new forms of expression and cultural innovation, it risks flattening differences and weakening symbolic meanings that communities depend on for identity, authority, and continuity. The entry and development of AI within Nigerian socio-cultural and religious contexts warrant investigation as a contested process, wherein issues of influence, power, authenticity, and identity are significant factors that must be considered.

Statement of the Problem

Colour has deep spiritual, moral, and cultural meaning in Christianity, Islam, and African Traditional Religion in Nigeria, yet the growing use of artificial intelligence (AI) to interpret these religious symbols is creating new challenges. Many of these AI tools are developed outside Nigeria and now find their way into contemporary religious texts, worship spaces, and online media. In doing so, they often carry foreign cultural assumptions that can distort local traditions and weaken indigenous theological understanding (Ungar-Sargon, 2025; Emenike et al., 2025). Their use is mostly limited to wealthier urban communities, leaving rural and less privileged groups behind and widening gaps in how people experience their faith. At the same time, AI's way of spotting patterns cannot grasp the lived, symbolic depth of colour in Nigerian religions, leading to misreading and misinterpretation that confuse believers or make worship feel less authentic. As these tools gain ground, authority over sacred meaning is shifting from theologians and clergy to programmers and algorithms, raising serious questions about who defines spiritual truth. These changes call for urgent

reflection on how AI is altering the understanding of colour in religion and what it means for education, worship, and cultural identity.

Objectives of the Study

1. To investigate the role of artificial intelligence in interpreting religious colour symbolism in Nigerian religious traditions.
2. To analyse the cultural and religious meanings of colours in Christianity, Islam, and African Traditional Religion within the Nigerian context.
3. To examine how technological tools influence the understanding and communication of religious symbols, especially colours.
4. To assess the impact of artificial intelligence on religious authority and traditional methods of interpretation.
5. To explore issues of access, inequality, and cultural relevance in the use of artificial intelligence for religious purposes in Nigeria.

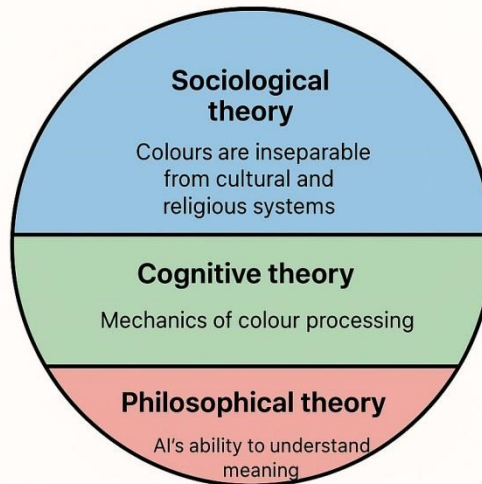
Research Questions

1. How is artificial intelligence currently applied in interpreting colour symbolism in Nigerian religious practices?
2. What do colours represent in the religious traditions of Nigerian Christianity, Islam, and African Traditional Religion?
3. How does the use of artificial intelligence influence traditional interpretations of religious colour symbols?
4. In what ways does artificial intelligence affect religious authority and the role of interpreters of sacred symbols?
5. What socio-cultural challenges are associated with using artificial intelligence in the religious life of Nigeria?

Theoretical Framework

Colour symbolism in artificial intelligence requires a multidisciplinary approach because colours are not merely visual impressions; they also communicate meaning that is culturally, cognitively, and philosophically grounded. In Nigeria, where colour is deeply linked with religion, ethnicity, and politics, interpretation becomes even more complex. Three theories—sociological, cognitive, and philosophical—offer different yet complementary insights into how artificial intelligence engages with colour symbolism in this environment.

Theoretical Perspectives on Colour Symbolism and AI in Nigeria



Sociological theory: From a sociological standpoint, colours are inseparable from cultural and religious systems. In Nigeria, white represents purity and holiness in both Christianity and Yoruba traditional religion, while red may signal danger, sacrifice, or spiritual force depending on its context. Black is commonly associated with mourning, yet it can also symbolize ancestral reverence. In the predominantly Muslim north, green carries deep Islamic meaning, standing for fertility, peace, and divine blessing. Artificial intelligence trained on global datasets, however, often reflects Western interpretations—such as black as wholly negative or red as romantic love—while ignoring local meanings. This imbalance risks silencing indigenous Nigerian perspectives and reinforces cultural hierarchies rather than reflecting diversity (Cui, 2025; Stein, 1997). The argument here is that colour in AI is never neutral: it reproduces dominant worldviews and may marginalize Nigerian symbolic traditions.

Cognitive theory: The cognitive view emphasizes the mechanics of colour processing. Artificial intelligence can detect and classify hue, brightness, and saturation in ways similar to human perception (Sutton, 2022). In Nigeria, this technical ability has practical value. The fashion industry, for example, thrives on vibrant traditional fabrics—such as Yoruba aso-oke or Igbo isiagu—where AI can help generate new colour combinations for designers. In agriculture, colour analysis supports crop health monitoring, while in education, colour-coded teaching aids enhance learning outcomes. The effectiveness of these tools, however, depends on whether the systems are trained with Nigerian-specific datasets that capture local aesthetics rather than relying on Western models. Thus, the argument is that AI can drive innovation in Nigeria if it is localized and culturally attuned.

Philosophical theory: The philosophical lens asks whether AI can ever grasp the meaning of colour. While machines may reproduce Nigerian patterns—such as the palette of Igbo masquerades or the white used in Anglican liturgy—they do so without lived experience of their spiritual or communal significance. The machine generates associations but does not understand them (Meyl, 2024; Nida-Rumelin & Staudacher, 2024). In Nigeria, where colours are tied to identity, spirituality, and memory, this raises the question: can AI truly engage symbolic depth, or does it merely simulate meaning? Humans attach history and lived emotion to colour, but AI only reflects patterns in data.

Viewed together, these perspectives sharpen the Nigerian debate. Sociologically, AI risks privileging Western over African meanings. Cognitively, it offers useful tools but only if grounded in Nigerian realities. Philosophically, it exposes the limits of machine representation in a culture where colour carries spiritual and communal weight. AI in Nigeria, therefore, does more than process colour—it enters contested symbolic spaces with consequences for culture, creativity, and meaning-making.

Research Methodology

Research Design

This study employed a qualitative research design to explore the sociological and cultural interpretations of religious colour symbolism in Nigeria and the ways these are being reshaped by the influence of artificial intelligence (AI). Descriptive and exploratory approaches were used to capture changing perceptions across Christian, Islamic, and African Traditional Religious communities.

Research Approach

The study adopted a combination of case studies, semi-structured interviews, and document/visual analysis. This triangulation enabled an in-depth understanding of how AI interacts with religious colour symbolism. Attention was given to cultural meanings, theological traditions, and the shifts brought about by digital and AI tools in religious contexts.

Sampling Rationale

Purposive sampling was used to select participants who were directly engaged with religious symbolism and technology. The sample included clergy, imams, traditional religious leaders, and designers, thereby balancing religious authority with technological expertise. In total, 120 participants were involved, divided into four groups of 30. These groups represented denominational diversity (Anglican, Catholic, Pentecostal, and Aladura), the three major religions in Nigeria (Christianity, Islam, and African Traditional Religion), and professionals in AI and design. Most participants were drawn from urban centres where AI use is more common, with a smaller representation from rural areas where traditional symbolism remains strong. This urban–rural balance provided insight into generational differences, levels of technological engagement, and cultural continuity.

Interview Questions

Semi-structured interviews were used to allow flexibility while ensuring focus on key research themes. Examples of guiding questions included:

1. What role do colours play in your religious tradition or community?
2. How has technology, particularly AI or digital media, influenced your understanding or use of colours?
3. Do you think AI preserves or alters the meaning of colours in worship? Why?
4. Have you observed conflicts between traditional colour symbolism and AI or media designs?
5. How do you think future generations will interpret religious colour symbolism in Nigeria?

Questions were adapted for specific groups: imams were asked about mosque decoration, Christian leaders about liturgical colours, and Yoruba traditional leaders about Orisha symbolism.

Data Collection Methods

- **Interviews:** Conducted with religious leaders, cultural practitioners, and artists to gather insights on traditional and contemporary meanings of colours.
- **Observation:** Participation in worship services, traditional ceremonies, and design workshops to witness colour use and AI influence in practice.
- **Document and Visual Analysis:** Review of religious materials such as vestments, banners, scriptures, liturgical calendars, and AI-generated images to identify patterns of symbolism.

Data Saturation

Interviews were conducted until responses began to repeat. By the 16th–18th interview in each group, no substantially new ideas emerged (e.g., the sacredness of white, gold's commercial associations, or the reinterpretation of purple among youth). Two additional interviews per group were conducted to confirm saturation, which yielded no further themes.

Coding and Data Analysis

Data were analysed thematically, with both manual coding and software (NVivo/Atlas.ti) employed for reliability.

- **Open coding:** Initial identification of recurring ideas (e.g., "sacred vs. aesthetic value," "AI misinterpretation," "generational shifts").
- **Axial coding:** Grouping of these ideas into broader categories (e.g., "tension between theology and media," "authority and interpretation").
- **Selective coding:** Development of central themes, such as "continuity vs. disruption" and "sacred vs. commercial interpretations of colour."

A second coder cross-checked sections of the data, and intercoder agreement was assessed to reduce bias.

Trustworthiness

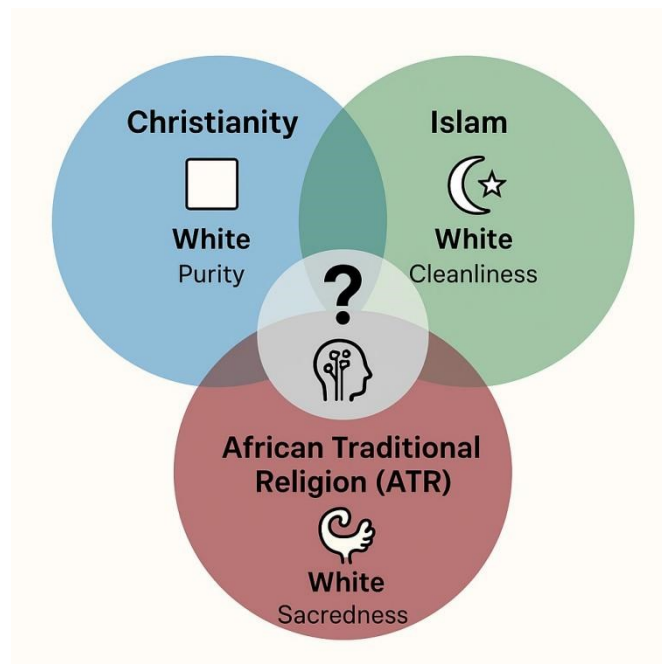
Credibility was ensured through triangulation of interviews, observations, and documents. Member-checking was conducted by sharing interpretations with selected participants for validation. Dependability was enhanced by maintaining an audit trail of coding decisions, while confirmability was strengthened through peer debriefing and reflexivity.

Ethical Considerations

All participants were briefed on the study's purpose, and informed consent (verbal or written) was obtained. Identities were kept confidential, and sensitive religious practices were not recorded without permission. Care was taken to respect the sanctity of religious symbols and cultural values throughout the research process.

Artificial Intelligence: Religious Colour Symbolism in Nigeria

Artificial intelligence (AI) is increasingly applied in theology, yet its role in interpreting religious colour symbolism remains contested. While AI cannot replace lived religious experience or spiritual interpretation, it can provide a comparative framework for examining how colours function across Christianity, Islam, and African Traditional Religion (ATR) in Nigeria. The main argument is that although these traditions sometimes share symbolic uses of colour, their theological foundations shape different emphases.



In Christianity, colour conveys truths about salvation history and divine revelation rather than serving mere decoration. Red is associated with sacrifice and covenant (Exod. 26:1; Heb. 9:22), white with holiness and righteousness (Rev. 3:4), purple with kingship and priesthood (Mark 15:17), and gold with eternal majesty (1 Kings 6:22). These meanings reinforce Christianity's conviction that history and worship revolve around redemption. In Nigerian Pentecostal mega-churches, however, stage lighting and multimedia are often chosen for visual impact rather than sacred meaning, displacing older associations such as red for Christ's sacrifice or white for purity (Adeyemi, 2021; Nwaoga, 2023). By contrast, African Initiated Churches such as the Cherubim and Seraphim and the Celestial Church of Christ retain traditions in which white garments symbolise holiness and unity, while other colours indicate leadership or prophetic roles. This practice draws from Yoruba heritage, where white, red, and black hold deep spiritual significance (Adoh & Olufemi, 2014; Adebisi, et al. 2022). Orthodox churches in Nigeria—Anglican, Methodist, and Roman Catholic—organise colour use through fixed liturgical calendars: red for the blood of Christ and the Spirit, purple for repentance, and white for joy and holiness. The design, manufacture, and even interpretation of church vestments is starting to be impacted by artificial intelligence (AI). According to many clerics, Nigerian clergy use church vestments including the chasuble, amice, cincture, cope, surplice, rochet, chimere, mitre, cassock, stole, pectoral cross, and clerical collar to draw attention to certain liturgical and spiritual themes both during and after services. In religions such as the Methodist, Anglican, and Roman Catholic churches, these vestments are ceremonial clothing with significant colour meanings (Ogunbiyi & Adedibu, 2025). These patterns contrast with the more flexible and revelation-driven use of colour among Aladura churches, showing how colour reinforces faith through either structured ritual or charismatic insight (Obielosi, 2019; Ojo, 2006).

ATR employs colour in a different register, grounding it in vitality, fertility, and ancestral connection rather than redemption. Red signifies energy and strength, green fertility and agriculture, black the living–dead link, and indigo ceremonial depth (Talebi & Farokhi, 2014). Yoruba cosmology embeds colour directly in the orisha: white (funfun) represents purity and ancestral connection; red (pupa) vitality and courage, linked to Sango and Ogun; black (dudu) power and mystery through Esu and Orunmila; green fertility and renewal; blue transcendence; and yellow joy and prosperity, tied to Oshun (Adebisi, et al., 2022; Adebayo, 2021; Ayodele, et al., 2020; Wassie, 2021). Thus, ATR colour symbolism is pragmatic and community-centred, linking the living, nature, and the ancestors. In Yoruba culture, witches, or Aje, are divided into three categories based on colour: Aje dudu, or black witches, who are evil and bring bad luck; Aje pupa, or red witches, who are also evil and linked to lethal practices like bloodletting; and Aje funfun, or white witches, who are kind, serene, and bring wealth and good fortune. According to traditional Yoruba theology, the colours symbolise the essence and purpose of these metaphysical creatures, even if they are not necessarily tangible (Adeyemi & Ademakinwa, 2024; Adeleye, 2023).

Islamic traditions also assign theological weight to colours, but with a focus on balance, transcendence, and divine order. Green symbolises paradise and blessing (*al-Kahf* 18:31; *al-Insan* 76:21), white purity and humility—especially in Hajj—blue cosmic order, and gold divine perfection, though moderated by warnings against ostentation. Red, yellow, and black carry mixed associations of love, joy, solemnity, and authority (Hirsch, 2020). In Islamic art and architecture, colour is used not merely for beauty but to guide thought and devotion.

A comparative reading shows both convergence and divergence. White symbolises purity in all three, but with distinct meanings: holiness in Christianity, humility in Islam, and ritual integrity in ATR. Green denotes agricultural prosperity in ATR, renewal in Christianity, and paradise in Islam. Gold is a universal marker of majesty, yet reflects eternal value in Christianity, royal power in ATR, and divine perfection in Islam. Red illustrates the sharpest contrast—sacrificial blood in Christianity, vitality in ATR, and dignity or authority in Islam. These correspondences reveal that colour is a shared theological language, but one shaped differently by biblical, Qur’anic, and ancestral cosmologies.

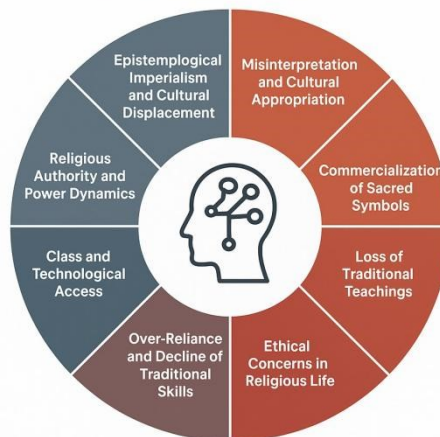
In Nigeria, colour also mediates emotion in social life, especially in grief and mourning. Dark colours such as grey, deep blue, and black express sorrow, loneliness, and sadness, particularly among widows, widowers, and young people. This resonates with global traditions, where black in the West represents grief, and white in parts of Asia symbolises purity and transition. In African contexts, brighter colours may also appear in mourning, expressing hope or spiritual victory over death. Psychological studies note that depressed individuals often prefer darker shades, but cultural context determines meaning (Ogunbiyi, 2025; Ran, et al., 2017; Ogunbiyi, et al., 2025). The Nigerian religious setting shows that colour symbolism is both shared and contested. It unites Christianity, Islam, and ATR around themes such as purity, majesty, and life, but divides them over sacrifice, ancestry, and paradise. Comparative approaches, whether technological or theological, must respect the authority of communities in defining these symbols. The real challenge is not whether to use new tools like AI but ensuring they illuminate rather than flatten Nigeria’s rich symbolic traditions (Abdelnour, 2025).

Colour	Christianity	Islam	African Traditional Religion (ATR)
White	Purity, holiness, righteousness, joy (Rev. 3:4); used in investments and liturgy	Purity, humility, especially in Hajj; spiritual readiness	Purity, sacredness, ancestral connection (<i>funfun</i>); also used in ritual offerings
Red	Sacrifice, blood of Christ, covenant, Holy Spirit, martyrdom, war (Isaiah 1:18; Exodus 12:13; Matthew 26:28; Hebrews 9:22)	Divine authority, justice, dignity, power, anger; mountains (Fatir 35:27); sometimes love	Vitality, courage, energy; linked with <i>Sango</i> and <i>Ogun</i> ; also ancestral power (<i>Aje pupa</i>)

Colour	Christianity	Islam	African Traditional Religion (ATR)
Purple	Kingship, royalty, penitence, priesthood; Lent and Advent liturgical seasons (Judges 8:26; Esther 8:15; Proverbs 31:22; Luke 16:19; Revelation 17:4)	Less common; sometimes associated with nobility and status	Royalty, sacred depth, and in Yoruba ritual drama, linked to leadership and hierarchy
Gold/Yellow	Eternal majesty, divinity, glory (1 Kgs 6:22); prosperity in Pentecostal use	Divine perfection, paradise, joy (though moderated against ostentation)	Joy, prosperity, wealth; tied to <i>Oshun</i> (yellow/gold)
Green	Hope, growth, renewal, new life (Psalm 52:8; Psalm 23:2; Jeremiah 17:8)	Paradise, fertility, peace, blessing; associated with the Prophet Muhammad (Al-Kahf 18:31; Ar-Rahman 55:76)	Fertility, agriculture, renewal, abundance
Black	Mourning, solemnity; sometimes authority in clerical attire (Job 30:30; Jeremiah 8:21; Revelation 6:5)	Authority, dignity, sometimes linked to solemnity	Mystery, ancestral reverence (<i>dudu</i>), power, link between living and dead; witches (<i>Aje dudu</i>)
Blue/Indigo	Transcendence, heaven, cosmic depth (esp. Marian devotion in Catholicism) (Exodus 24:10; Exodus 26:1; Numbers 15:38–39; Ezekiel 1:26)	Cosmic order, balance, spirituality	Ceremonial depth, transcendence, mystery

Sociological Concerns and Implications in Nigeria

CHALLENGES OF AI AND RELIGIOUS SYMBOLISM IN NIGERIA



Artificial intelligence (AI) can help to preserve and disseminate religious texts, traditions, and rituals, but it also raises concerns about cultural appropriation, misinterpretation, and the possibility of AI-driven narratives obscuring traditional interpretations of religious symbolism in Nigeria.

1. **Epistemological Imperialism and Cultural Displacement:** Artificial intelligence systems usually carry the beliefs and worldviews of those who designed them, often shaped by Western ways of thinking. When these systems are brought into Nigeria without adjusting them to fit local culture, they can bring about epistemological imperialism—the takeover of local ways of understanding religion by foreign ideas. This can weaken or replace local theological traditions, especially in how colours are used to express spiritual meaning in African religious settings (Mbiti, 1990; Smith, 2012).
2. **Misinterpretation and Cultural Appropriation:** Artificial intelligence, when used without cultural sensitivity, can misrepresent the meanings of religious colors and symbols. For example, red, white, and blue in Christian worship have specific meanings related to blood, purity, and heaven. These meanings can easily be misunderstood or wrongly applied when AI draws from data outside the religious or cultural setting. This creates a risk of cultural appropriation—taking symbols out of their original religious context and using them in ways that offend believers or mislead the public (Chidester, 2005). In African Christianity, especially, where color and symbols are tied to deep historical and communal experiences, such misinterpretation can harm cultural and spiritual identity (Mbiti, 1990).
3. **Commercialization of Sacred Symbols:** AI tools are now being used to design products, create advertisements, and make art that includes religious elements. Colors like gold and purple, which signify divinity and royalty in Christian tradition, are sometimes used in commercial branding without respect for their sacred meaning. This form of commercialization reduces holy symbols to decorations or selling points (Belk and Tumbat, 2017). The result is that what is holy becomes ordinary, and spiritual meanings are lost. This can be especially damaging in societies where these colors are still strongly connected to worship and sacred rituals.
4. **Loss of Traditional Teachings:** AI systems can generate interpretations of religious texts, images, and teachings that reflect the data they were trained on. This often includes popular or dominant theological views while ignoring local traditions. In many communities, especially in Africa and Asia, religious colour symbolism is passed down through storytelling, music, and communal worship. These traditional interpretations are at risk of being replaced by simplified AI versions that lack depth or cultural roots (Ogunnaike, 2020). Over time, younger generations may begin to trust AI-generated materials more than the teachings of elders or community leaders, which weakens the transmission of religious knowledge (Smith and Kumar, 2019).

5. **Ethical Concerns in Religious Life:** Using AI in religion brings up serious ethical questions. For example, if people begin to use AI to help them make moral or spiritual decisions, it may weaken their sense of personal responsibility. In Christianity, human beings are expected to think, pray, and discern right from wrong. When machines begin to shape those decisions, it may interfere with free will and moral accountability (Coeckelbergh, 2020). Also, if AI creates prayers, sermons, or spiritual advice, it may sound real, but it lacks the spiritual experience or divine inspiration that comes from genuine religious practice (Campolo and Darling, 2012). This raises concerns about the authenticity of such content.
6. **Over-Reliance and Decline of Traditional Skills:** As religious communities make more use of AI—for example, in preparing sermons, prayers, or religious lessons—there is a risk that important skills will be lost. Clergy and teachers might stop studying deeply or praying as they used to, depending instead on fast AI-generated results. Over time, this could lead to a decline in biblical study, preaching ability, and spiritual depth (Schuurman, 2013). Younger people, especially, may grow up without learning how to interpret Scripture or understand the meaning behind religious symbols, because they are used to quick and automated answers (Noble, 2018).
7. **Class and Technological Access:** Only a few churches and Islamic centres in Nigeria, mostly in cities and among the rich, have the tools and money to use AI in religious activities. This means that people in rural or poor areas are left out, leading to more division between the rich and poor in how religion is practiced. The use of AI may also reduce the physical and emotional connection people have with traditional forms of worship, like the meaning of colours in dress and space (Adeyemi, 2021; Eze, 2023).
8. **Religious Authority and Power Dynamics:** When AI is used to explain religious symbols like colours, the power to interpret religion may move from pastors, imams, or scholars to those who build the technology—people who may not understand local religion or culture. This could cause confusion or disagreements between religious leaders and technology users. It may also reduce the respect people have for traditional interpreters of religious meaning (Barrett and Goleman, 2020; Nwaoga, 2023; Oduyoye, 2004).

Discussion of Findings

1. Traditional Symbolism and Contemporary Practice: The findings reveal that colour maintains a profound symbolic role across Nigerian religious traditions, yet its contemporary interpretation shows notable variation. In Christian contexts—Anglican, Catholic, and Pentecostal—white consistently signifies purity and holiness, red conveys the Holy Spirit or martyrdom, purple signals royalty and penitence, and green denotes hope and growth, reflected in Church vestments, altar décor, and liturgical seasons (Kalu, 2008).

Islamic respondents similarly attach strong symbolic value to colours, with green representing peace, prosperity, and the Prophet Muhammad, and white embodying humility and spiritual readiness in mosque spaces. In traditional African religions, red is strongly associated with ancestral power, while white symbolizes purity in ritual offerings. Comparatively, while all three traditions recognize a semiotic function of colour, African traditional religions emphasize ancestral and spiritual potency, Christianity emphasizes liturgical and moral meaning, and Islam stresses both theological and communal representation (Marshall, 2009).

2. Generational Differences and Cultural Reinterpretation: Generational analysis underscores divergent approaches to colour symbolism. Older clergy among the respondents lament a perceived “loss of liturgical consciousness,” where sacred meaning is subordinated to spectacle. In contrast, younger leaders, musicians, and worshippers employ colour as part of broader creative and expressive strategies, associating gold or royal blue with prosperity, celebration, and divine favour rather than classical theological categories. This reflects a negotiated reinterpretation rather than wholesale rejection of tradition, illustrating how religious symbols adapt in response to shifting cultural and aesthetic sensibilities (Gaiya, 2004). Recent findings from young people in Lagos State reveal that digital technologies are increasingly shaping patterns of behaviour, social interaction, and even forms of unrest—both through platforms such as X and within Nigerian society at large. On the positive side, these technologies can contribute to human capital development by providing opportunities for digital skill acquisition, enhancing employability, and widening access to socio-economic resources. In Christian communities, online platforms for Bible study, virtual counselling, and digital mentorship also serve as channels for nurturing spiritual growth, building resilience, and encouraging purposeful engagement among youths. At the same time, the dangers of unregulated exposure to digital tools are significant. Sophisticated innovations such as manipulated videos and algorithm-driven feeds may spread false information, fuel cyberbullying, glamorise violent conduct, and promote lifestyles that run counter to Christian moral teachings. The impact of these technologies on youth restiveness is therefore double-edged: while they can empower and inspire, they may equally destabilise. The overall outcome depends on the educational, pastoral, and communal structures that families, churches, and society put in place to guide young people in their use (Ogunbiyi et al., 2025).

3. Social Media, Urbanisation, and Cultural Shifts: Urbanisation and digital culture have emerged as significant mediating factors in the interpretation of religious colour. Respondents reported that social media, livestreamed services, and worship videos favor visually striking and “camera-ready” colour schemes, particularly in Pentecostal and charismatic churches. Gold, silver, and non-traditional tones increasingly appear in spaces formerly constrained by classical liturgical palettes, producing a form of “visual rebranding.” This shift contrasts with older congregants’ interpretations: where purple during Lent traditionally signals penitence, younger worshippers often perceive it as a marker of elegance and status. Evidently, urban cosmopolitan environments foster

reinterpretation of longstanding symbols, as lifestyle and media exposure reshape theological semiotics into aestheticized, performative expressions (Ukah, 2007). Respondents also noted that colours are used in meditation, healing practices, religious art, and sacred architecture. In these contexts, colours are seen as ways of directing attention, bringing calmness, and creating balance between the body and the mind. They are also taken as symbols that point to particular spiritual forces, worlds, or dimensions, helping people focus, encouraging creativity, and supporting stronger spiritual connection. In November 2022, the Central Bank of Nigeria announced a redesign of larger denomination banknotes (₦1000, ₦500, and ₦200) utilising advanced technology to tackle currency hoarding, counterfeiting, and filthy and worn-out notes. The alteration also had social and psychological consequences, as people identify money's hues with trust, national identity, and everyday use. The abrupt shift sparked bewilderment, opposition, and fear among residents, emphasising the importance of colour in design, stability, and value. The redesign highlights how government policy is linked to social life, cultural meaning, and spiritual knowledge, since residents had to adapt to the new notes' practical usage and significance in their daily lives (Ogunbiyi, 2025).

4. Interreligious and Ethnic Dynamics: The data reveal extensive syncretism in the use of colour across religious and ethnic boundaries. Traditional rituals occasionally adopt white garments reminiscent of Christian deliverance or red cloths for spiritual protection, illustrating cultural and theological borrowing (Marshall, 2009). Interreligious comparison shows that colour functions not only as a theological marker but also as an ethnic and communal identifier: Muslim respondents described wearing white and green during Eid as a dual expression of piety and cultural pride, while Christian respondents from Yoruba and Igbo backgrounds emphasized familial and ethnic heritage as influencing liturgical colour choices. Evidentially, these practices demonstrate that colour operates in multiple semiotic registers—ritual, theological, aesthetic, and communal—highlighting the interplay of religion, ethnicity, and identity in Nigerian spiritual life.

5. Tensions between Sacred and Aesthetic Value: Across traditions, participants expressed concern over the increasing prioritization of aesthetic appeal over spiritual meaning. Major religious events—harvests, ordinations, and crusades—frequently favor photogenic colour arrangements, reflecting a commodification of religious expression (Turkle, 2015). Comparative observation indicates that while traditional Christian and Islamic uses of colour remain didactically or liturgically informed, the influence of media and spectacle introduces a competing set of values, privileging visual impact over sacred intentionality. This tension is most pronounced in urban Pentecostal contexts, where colour functions as both religious semiotic and social performance, highlighting broader cultural negotiations between piety, display, and identity.

6. Preserving and Revitalising Religious Colour Symbolism in Nigeria: Artificial Intelligence (AI) can help protect and renew the meanings of colours used in religion. Many religions use colours to send spiritual messages. For example, purple in Christianity shows

repentance, white in African traditions can mean ancestral presence, and saffron in Hinduism is linked with purity. These meanings are at risk of being forgotten in today's changing world. AI can help by saving this knowledge, making it easier to teach, and even helping people use it in new ways. AI assists by storing and organising information. With the help of computer programs, pictures of religious objects, clothing, or places of worship can be scanned and labelled with the colours and their meanings. This makes it easy for people to study and learn from these examples. As Zolhavarieh and Rahimi explain, AI can look at visual information and help preserve religious ideas in a digital way (Zolhavarieh & Rahimi, 2023). This is especially useful in communities where colour meanings are passed down through stories and not always written down.

Another benefit of AI is that it can make religious learning more interactive. Children and young people today use digital tools a lot, and AI can help explain why certain colours are used in religious seasons or events. For example, an AI tool could help explain why red is used at Pentecost or black on Good Friday. Taverna and Russo point out that AI can help design religious images or clothing that keeps old meanings but also looks modern (Taverna & Russo, 2022). This way, younger people can connect better with their religious background.

AI can also help keep local meanings of colour alive. Not every religion or culture sees colours the same way. For example, white in Western Christianity often means purity, but in African Christianity, it can also mean a connection to ancestors. AI can help map these different meanings by collecting data from different parts of the world. Ede and Onwuchekwa believe that AI can be trained to understand these cultural differences and help protect them from being lost (Ede & Onwuchekwa, 2023).

Besides preserving traditions, AI can also help improve religious experiences. By looking at past practices and current trends, AI can suggest new ways to use colours in worship. It can also help leaders know how colours make people feel during services. Chatterjee and others write that AI can help make religious events more meaningful for today's people while still keeping their original purpose (Chatterjee, et al., 2021). Even though AI has many good uses, people must be careful with how they use it in religion. It is important that religious leaders and community members help guide how AI tools are used. Religious symbols, like colours, carry deep meaning. As Boddington reminds us, using AI for moral and spiritual matters requires careful thought and respect (Boddington, 2017).

The early Christians, as described in Hebrews 11:13b, lived as "strangers and exiles" in the world, refusing to let its culture or values define their identity. Their path of faith was marked by devotion, hardship, and hope for a better homeland with God. In the same way, believers today are called to live faithfully in a changing world, where new developments continually challenge our sense of authority, identity, and belonging. The church must approach these realities with discernment—making use of what is beneficial for learning, service, and community life, while resisting anything that diminishes the voice of God or undermines the sacredness of Christian life and witness (Ogunbiyi & Adedibu, 2025).

7. Theoretical Integration and Synthesis: The analysis of Nigerian religious colour symbolism through the lenses of sociological, cognitive, and philosophical theories helps to clarify the study's findings and their broader implications.

1. **Sociological:** Colours are embedded in cultural and religious systems that communicate identity, hierarchy, and belonging. Respondents across traditions consistently associated colours with communal memory (e.g., white in Christian vestments, green in Islamic rituals, and red in Yoruba sacrificial rites). However, AI-driven media and urban worship practices increasingly reflect Westernised palettes that prioritise aesthetics over theology.

2. **Cognitive:** Cognitive theory emphasises colour perception and classification, which AI replicates through pattern recognition. Findings reveal that AI can enhance liturgical designs and educational tools, particularly for younger generations. Yet, these designs sometimes misrepresented theological intent (e.g., purple interpreted as elegance rather than penitence).

3. **Philosophical:** AI produces representations without lived experience. Participants worried about the loss of sacred intentionality. While AI may reproduce religious colour patterns, it lacks the embodied sense of holiness, humility, or ancestral continuity.

These facts and hypotheses explain why colour in Nigerian religion, culture, and society is both a source of continuity and disruption. In Nigeria, artificial intelligence is influencing authority, identity, theology, and symbolic economy. It may highlight the limitations of machine-generated meaning, promote local creativity, and maintain global hierarchies. Generational inequalities, including the embracing of colour by young people, emphasise the contested territory in this study.

Conclusion and Recommendations

This study shows that Artificial Intelligence creates both opportunities and risks for the use of colour in Nigerian religion. In Christianity, Islam, and African Traditional Religion, colours are not just decoration but carry sacred meaning. Because most AI systems are built outside Nigeria, there is a danger that foreign ideas and commercial uses of colour will replace local meanings. The findings also reveal a clear difference between generations. Younger people in cities are drawn to colours shaped by social media and digital designs, while elders and traditional leaders hold firmly to long-established meanings. This shows that AI does not only repeat tradition but can also change it, often valuing appearance and popularity over deeper religious meaning. Even so, AI can be useful. It can help scholars study traditions, protect oral knowledge, and make religion more engaging for younger people who already live in the digital world. If guided carefully, AI can support rather than damage religious life. The key is that religious leaders and cultural custodians must remain in charge of meaning, not global companies or software designers. In conclusion, colour symbolism in Nigerian religion can remain strong in the digital age if AI is used with respect for culture, faith, and local context. The main task is for leaders, teachers, and policy makers to find a balance so that new technology does not destroy but instead strengthens what is sacred.

1. **Develop Nigerian-based AI:** AI tools for religious use should be built with input from Nigerian theologians, cultural experts, and language specialists, so that colour meanings are true to local traditions.
2. **Create Ethical Rules:** Religious organisations such as CAN, NSCIA, and traditional councils should write clear rules for how AI is used in worship and teaching, to prevent misuse and misrepresentation.
3. **Train Religious Leaders:** Clergy, imams, priests, and teachers should learn the basics of AI so they can guide its use and keep control of religious meaning.
4. **Include Rural and Poor Communities:** Efforts should be made to give rural and less wealthy communities access to AI tools, through partnerships with NGOs, schools, and cultural groups.
5. **Preserve Local Traditions:** Oral traditions, rituals, art, and practices about colour should be recorded and stored digitally, so that AI systems are trained on real Nigerian knowledge rather than foreign models.
6. **Educate the Public:** People should be taught about the good and bad sides of AI in religion, through workshops, talks, and publications.
7. **Work Together:** Universities, seminaries, and faith communities in Nigeria should work jointly to guide the role of AI in religion, ensuring that technology supports faith instead of undermining it.

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